RCA

PRO

Video Camcorder
Models Pro867/Pro870
Owner's Manual

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RCA

PRO8®

Video Camcorder
Owner's Manual
Models Pro867
Pro870

8

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Product Registration

Mail Your Registration Card Today

A *Product Registration Card* is packed with your camcorder. Please fill out the card and return it immediately.

Your prompt submission of this card confirms your right to the protection available under the terms and conditions of the warranty and also allows us to contact you should it ever become necessary.

With your card on file, we can also help you in the event of loss or theft by verifying your ownership.

If you did not receive a *Product Registration Card*, please contact your dealer.

Attach Sales Receipt Here and File For Future Reference

To obtain warranty parts and service, you must show your sales receipt (or other evidence of purchase) to your Authorized RCA Compact Camcorder Servicenter.

Tape or staple your sales receipt to this manual so you will have it handy should service ever be needed. Do not mail your sales receipt to us. File it at home with your owner's manual for future reference.

Record Vital Information Here.

No other RCA camcorder has the same serial number as yours. You will find the serial number and model number on the bottom of your camcorder.

Make sure both numbers are recorded below so that you will have them in case your camcorder is stolen or you need a complete description for identification.

Model No. Pro867 or Pro870

Serial No. _____

Purchase Date: _____

Purchased From: _____

_____

_____

_____

SAFETY PRECAUTIONS

Your video camcorder's AC adapter/charger will operate on 100-240 volts AC, 50/60 Hz, and has a polarized plug. Because one blade of the plug is wider than the other, the plug fits in the wall socket only one way. Do not defeat the safety feature of this plug. If you need an extension cord, use a polarized extension cord.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

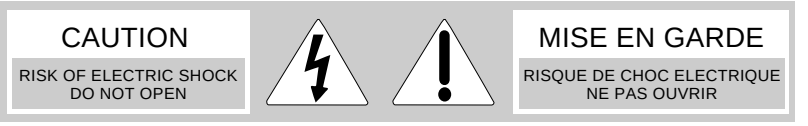
ATENTION: POUR ÉVITER LES CHOCS ÉLECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

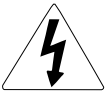
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE COVER (OR BACK). NO USER-SERVICEABLE PARTS ARE INSIDE. IF YOU SPILL LIQUID ON THE CAMCORDER OR ADAPTER/CHARGER, DISCONNECT THE AC ADAPTER/CHARGER'S POWER CORD TO PREVENT POSSIBLE FIRE OR SHOCK HAZARD AND CONSULT AUTHORIZED SERVICE PERSONNEL. MOISTURE CAN DAMAGE INTERNAL PARTS. REFER ALL SERVICE TO AUTHORIZED RCA COMPACT CAMCORDER SERVICENTER PERSONNEL ONLY.

Caution: Read "Important Safety Instructions for AC Adapter/Charger" *on the next page* before using the AC adapter/charger.

Caution: Maintain electrical safety. Powerline-operated equipment or accessories connected to this unit should bear the UL listing mark or CSA certification mark on the accessories themselves and should not have been modified so as to defeat the safety features. This will help avoid any potential hazard from electric shock or fire. If in doubt, contact qualified service personnel.

WARNING: To prevent fire or shock hazard, do not expose camcorder or AC adapter/charger to rain or moisture.





The symbol of a lightning flash within a triangle is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure and which may be of sufficient magnitude to constitute a risk of electric shock.

An exclamation point within a triangle is intended to alert the user to the presence of important operating and maintenance (service) instructions in the literature accompanying the product.

Caution: Avoid operating your camcorder immediately after moving it from a cold location to a warm location. Give the camcorder 1-1/2 to 2 hours to reach a stable temperature before inserting a video cassette. When moved from a cold area to a warm location, moisture may condense on the head drum inside the machine. This moisture could cause the tape to stick to the headwheel and damage the headwheel or tape.

IMPORTANT SAFETY INSTRUCTIONS

Important Safety Instructions for AC Adapter/Charger

Before using the AC adapter/charger, read all instructions and cautionary markings on (1) AC adapter/charger, (2) battery, and (3) product using battery.

Caution: To reduce risk of injury, charge only rechargeable batteries type BB060, or BB120. Other types of batteries may burst causing personal injury and damage.

Do not expose the adapter/charger to moisture of any kind.

Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons.

To reduce risk of damage to electric plug and cord, pull out the cord with the plug rather than the cord when disconnecting the adapter/charger from the wall outlet.

Make sure the cord is located so that it will not be stepped on, tripped over, or otherwise subjected to damage or stress.

Use of an improper extension cord could result in a risk of fire and electric shock. If an extension cord must be used, make sure that:

1. Pins on the plug of the extension cord are the same number, size, and shape as those of the plug on the adapter/charger.
2. Extension cord is properly wired and in good electrical condition, and
3. Wire size below is met:

Minimum AWG Size	Length of Extension Cord (Feet)
18	Equal to or less than 100
16	Equal to or less than 150

Do not operate adapter/charger with a damaged cord or plug. Replace it immediately.

Do not operate adapter/charger if it has received a sharp blow, been dropped, or otherwise damaged in any way. Take it to a qualified serviceman.

Do not disassemble charger. Take it to an Authorized RCA Compact Camcorder Servicenter when service or repair is required. Incorrect reassembly may result in a risk of electric shock.

To reduce risk of electric shock, unplug charger from outlet before attempting any maintenance or cleaning.

Be sure to save these operating instructions for future reference.

FCC Warning: Any unauthorized changes or modifications to this equipment may void the user's authority to operate.

Caution: The unauthorized recording of televisions programs and other materials may infringe the rights of others.

IMPORTANT SAFEGUARDS

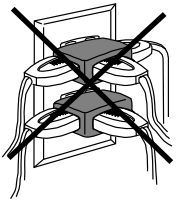
In addition to the careful attention devoted to quality standards in the manufacture of your video product, safety is a major factor in the design of every instrument. However, safety is your responsibility too.

These pages list important information that will help to assure your enjoyment and proper use of a camcorder, adapter/charger, and accessory equipment. Please read them carefully before operating your video products.

Installation

1. **Read and Follow Instructions—** All the safety and operating instructions should be read before the video product is operated. Follow all operating instructions.

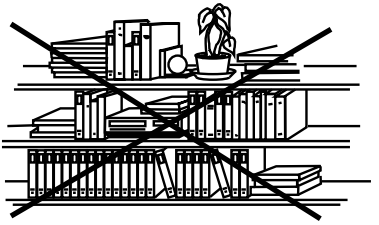
2. **Retain Instructions—**The safety and operating instructions should be retained for future reference.
3. **Heed Warnings—**Comply with all warnings on the video product and in the operating instructions.
4. **Polarization—**This video product is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug still fails to fit, contact your electrician to replace your obsolete outlet. To prevent electric shock, do not use this polarized plug with an extension cord, receptacle, or other outlet unless the blades can be fully inserted without blade exposure. If you need an extension cord, use one with a polarized plug.
5. **Power Sources—**This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your home, consult your video dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.
6. **Overloading—**Do not overload wall outlets or extension cords as this can result in a risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard. Periodically examine the cord, and if its appearance indicates damage or deteriorated insulation, have it replaced by your service technician.



7. **Power-Cord Protection—**Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the video product.

IMPORTANT SAFEGUARDS (continued)

8. **Ventilation—**Slots and openings in the video products are provided for ventilation to ensure reliable operation of the video product and to protect them from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video product on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the video product manufacturer's instructions have been followed.



9. **Attachments—**Do not use attachments unless recommended by the video product manufacturer as they may cause hazards.

Caution: Maintain electrical safety. Powerline operated equipment or accessories connected to this unit should bear the UL listing mark or CSA certification mark on the accessory itself and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.

10. **Water and Moisture—**Do not use this video product near water—for example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, or near a swimming pool and the like.

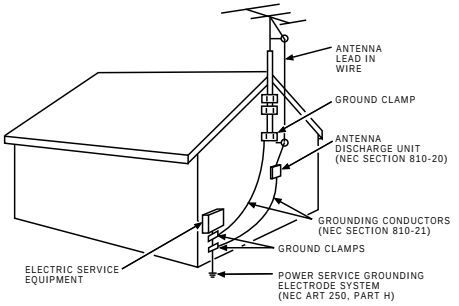
11. **Accessories—**Do not place this video product on an unstable cart, stand, tripod, bracket, or table. The video product may fall, causing serious injury to a child or adult as well as serious damage to the video product. Use this video product only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the video product. Any mounting of the product should follow the manufacturer's instructions and use a mounting accessory recommended by the manufacturer.

11A A video product and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the video product and cart combination to overturn.

(continued on next page)

12. **Outdoor Antenna Grounding—**If an outside antenna or cable system is connected to the video product, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984 (Section 54 of Canadian Electrical Code, Part 1) provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See example below.

Example of Antenna Grounding


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
ELECTRIC SERVICE EQUIPMENT
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

13. **Power Lines—**An outside antenna system should not be located in the vicinity of overhead power lines, other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching or approaching such power lines or circuits as contact with them might be fatal. Installing an outdoor antenna can be hazardous and should be left to a professional antenna installer.

Use

14. **Cleaning—**Unplug this video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

15. **Object and Liquid Entry—**Never push objects of any kind into this video product through openings as they may touch dangerous voltage points or “short-out” parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.

IMPORTANT SAFEGUARDS

16. **Lightning—**For added protection for this video product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power line surges.

Service

17. **Servicing—**Do not attempt to service this video product yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
18. **Conditions Requiring Service—** Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions.
    A. When the power-supply cord or plug is damaged.
    B. If liquid has been spilled, or objects have fallen into the video product.
    C. If the video product has been exposed to rain or water.
    D. If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
    E. If the video product has been dropped or the case has been damaged.
    F. When the video product exhibits a distinct change in performance—this indicates a need for service.
19. **Replacement Parts—**When replacement parts are required, have the service technician verify that the replacements he uses have the same safety characteristics as the original parts. Use of replacements specified by the video product manufacturer can prevent fire, electric shock, or other hazards.
20. **Safety Check—**Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the video product is in safe operating condition.

Optional Accessories

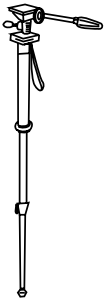
We invite you to take a look at some great ideas for sparking creativity and adding to the fun of using your 8mm camcorder. These pages have a selection of accessories to help make your memorable moments look and sound even better.

These accessories are designed to make the process of recording and watching your videos more enjoyable.

To order accessories, contact your local Dealer.

If a dealer is not nearby, all accessories are available through toll-free ordering or by using the order form *on page 5*.

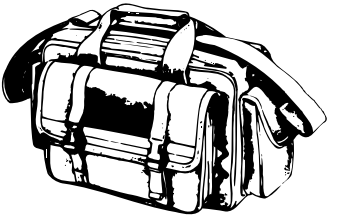
AC036 Monopod



This monopod gives a flexible alternative to using a traditional tripod. Its rugged compact design provides excellent stability. It is ideal for all camcorder sizes and photo cameras. It has a quick-release shoe, three-section leg, handstrap, foot step and weighs only 35 ounces.

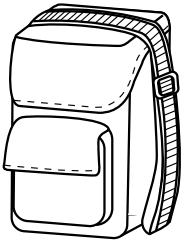
All specifications and descriptions of accessories are subject to change without notice.

AC025A Soft Carrying Case



Custom compact soft case designed especially to provide protection and utility for your RCA 8mm camcorder and most accessories. Rugged fabric lined with soft non-abrasive material and generous padding. Has three outside pockets with storage for lens filters, adapters, batteries, and tapes.

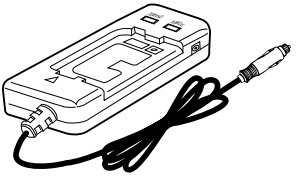
ACB065 Carrying Case



This carrying case is designed to fit your 8mm camcorder and carry an extra battery or tape. This durable nylon carrying case can be carried around your waist or over your shoulder.

Optional Accessories (continued)

DCC80 DC Car Cord Adapter/Charger

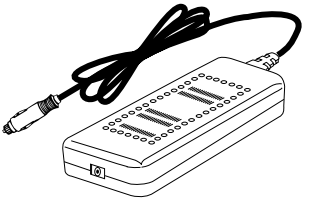


Caution: Do not use the DCC07, DCC71, DCC012 or DCC096 car cords with this camcorder.

This DC car cord adapter/charger enables you to operate your camcorder from your car, truck, or RV by plugging the DCC80 directly into the vehicle's cigarette lighter socket. It will also charge the BB060 battery supplied with your camcorder or the BB120 (long play) battery.

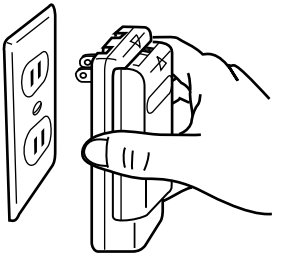
The DCC80 is specially designed to convert power from a 24-volt or 12-volt battery to a 6-volt output. The vehicle does not have to be turned on for the DCC80 to operate the camcorder.

DCC06 DC Car Cord Adapter



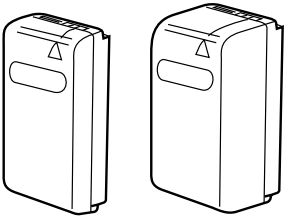
Caution: Do not use the DCC07, DCC71, DCC012 or DCC096 car cords with this camcorder.

This DC car cord adapter enables you to operate your camcorder from your car, truck, or RV by plugging the car cord directly into the vehicle's cigarette lighter socket. The DCC06 is specially designed to convert power from a 24-volt or 12-volt battery to a 6-volt output. The vehicle does not have to be turned on for the DCC06 to operate the camcorder.



CPS85 AC Battery Charger

The CPS85 battery charger plugs directly into an AC outlet, and charges the BB060 and BB120 camcorder batteries. Because the CPS85 operates on 100-240 volts, 50/60 Hz, it can be used virtually anywhere in the world. A plug adapter may be required in some countries. Charging takes approximately 5 hours for the BB060 (1- hour) battery or 10 hours for the BB120 (2- hour) battery.



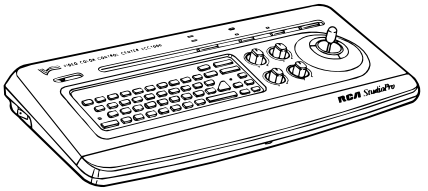
BB060 BB120

Rechargeable Batteries

These rechargeable nickel-cadmium batteries are specifically designed for long life. The BB060 can power your camcorder up to 1 hour, and the BB120 up to 2 hours (depending on how much you use zoom and pause). Both can be recharged with the AC adapter/charger that came with your camcorder. Initial charging and recharging takes about 1 hour for the BB060 or 2 hours for the BB120.

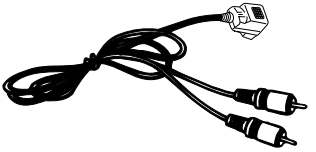
Optional Accessories (continued)

VCC1000 Video Color Control Center



The VCC1000 is actually two accessories in one. The color control center allows you to adjust the color intensity, tint, white balance, and sharpness of tapes being dubbed. This is especially helpful when the original tape was produced in poor lighting conditions or poor color settings. The second feature, the character generator, lets you create titles that can be recorded on your tapes. This lets you add a professional and/or personal touch to your home videos.

VAA009 Audio/Video Input Cable

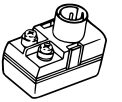


This audio/video input cable will enable you to use your camcorder to record from other devices which have audio/video output jacks (such as another VCR, camcorder, or TV monitor). This makes it convenient to copy tapes or record a television broadcast. The VAA009's plug is specially designed so other cables and accessories can be plugged into the camcorder at the same time.

AVS80 Synchro Edit Cable

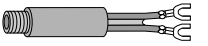
This cable attaches to the camcorder to provide video and audio outputs for dubbing, or for direct input to a monitor receiver. It can also control the start/stop functions of a VCR with a compatible 2.5mm *PAUSE*, *EDIT*, *EDIT IN*, *EDIT IN/OUT*, or *SYNC* jack when copying a tape.

193983 Cable Transformer



The 193983 is used to connect a standard 300-ohm antenna twin-lead to a standard round 75-ohm connector on the RF output adapter, a VCR, or TV.

AH011 Cable Transformer



The AH011 is used to connect a standard round 75-ohm antenna cable to the 300-ohm screw terminals on a TV.

All specifications and descriptions of accessories are subject to change without notice.

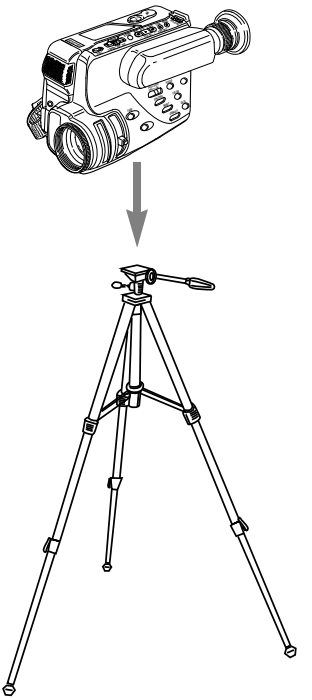
Optional Accessories (continued)

AC035 Super Lightweight Tripod

This tripod's fluid-effect head provides smooth camera pan and tilt. The quick-release mount makes it easy to attach or remove the camcorder. The grooved, tubular 3-section leg design folds down to 23-1/2" when not in use and weighs only 3-1/2 lbs. Rubber feet allow for sure footing.

Using an Optional Tripod

Mounting the camcorder on a tripod, such as AC035 will keep the camcorder steady and produce excellent video results.



Caution: Before using a tripod, make sure it is stable enough to hold the camcorder without falling over.

When attaching your camcorder to a tripod, be careful not to force the tripod screw into the camcorder's tripod mounting hole.

The tripod screw should not protrude into the camcorder more than approximately three-eighths (3/8) inch. Forcing the screw could damage the mounting hole on the bottom of the camcorder.

Accessory Order Form

Detach Here

Order Form for Camcorder Model Pro867 or Pro870				
Description	**Part No.**	**Price**	**Qty.**	**Total**
Carrying Case	ACB065	$ 27.95		
Soft Camcorder Case	AC025A	$ 59.95		
Super Lightweight Tripod	AC035	$ 69.95		
Monopod	AC036	$ 39.95		
75-300 Cable Transformer	AH011	$ 1.90		
Rechargeable Battery	BB060	$ 59.95		
Rechargeable Battery	BB120	$ 79.95		
AC Adapter/Charger	CPS80	$189.95		
AC Adapter/Charger	CPS85	$ 84.95		
RF Output Adapter	CRF80	$ 49.95		
DC Car Cord Adapter	DCC06	$ 74.95		
DC Car Adapter/Charger	DCC80	$169.95		
Audio/Video Input Cable	VAA009	$ 29.95		
Audio/Video Output Cable	VAA011	$ 24.95		
Video Color Control Center	VCC1000	$349.00		
Coaxial RF Cable	177233	$ 11.85		
300-75 Cable Transformer	193983	$ 6.95		
Power Connector	203361	$ 24.10		
Replacement Remote	211028	$ 49.95		
Shoulder Strap	212473	$ 13.95		

Prices are subject to change without notice.

Total Merchandise ($10 Minimum Order).....$_____

Sales Tax.....$_____

We are required by law to collect the appropriate sales tax for each individual state, county, and locality to which the merchandise is being sent.

Shipping, Handling, and Insurance.....$ 5.00

Total Amount Enclosed.....**$_____**

Use VISA or MasterCard preferably. Money order or check must be in U.S. currency only. No COD or cash.

Please complete other side also

Accessory Order Form (continued)

Charge your order on your VISA or MasterCard by filling in below

USE YOUR CREDIT CARD

IMPORTANT: Copy complete account number from your VISA card

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

My card expires: ☐☐ ☐☐

IMPORTANT: Copy complete account number from your MasterCard

☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Copy Number above your name on MasterCard ☐☐☐☐ My card expires: ☐☐ ☐☐

AUTHORIZED SIGNATURE

Prices are subject to change without notice.

Print or type your name and address clearly. This will be your mailing label.

A complete and correct order will save you days of waiting.

Name: _____

Street: _____

_____ Apt: _____

City: _____

State: _____ Zip: _____

Please make sure that both sides of this form have been filled out completely.

Detach Here

- Allow 8 weeks for delivery.
- All accessories are subject to availability.
- Where applicable, we will ship a superseding model.

Accessory Order Form (continued)

To order accessories, contact your local Dealer.
If a dealer is not nearby, you can also follow the directions below to order by telephone or direct-by-mail.

United States Orders

To place your order by phone, have your Visa or MasterCard ready and call the toll-free number listed below between 8AM and 8PM Eastern Standard Time. **Use this number only to place an order for accessory items listed on this order form.**

1 – 800 – 338 – 0376

Most times your order will be shipped UPS within 72 hours of receipt. If ever it is not possible to ship within 30 days, we will notify you with an update on your order and an option to cancel.

To place your order by mail, detach and mail the completed order form with credit card information, money order, or check in U.S. currency (made payable to Thomson Consumer Electronics, Inc.) to the following address:

RCA Video Accessories
PO Box 8419
Ronks, PA 17573

For more information on these accessories (or current prices), write to the following address:

Video Accessories Customer Service
Thomson Consumer Electronics, Inc.
Distributor & Special Products
2000 Clements Bridge Rd
Deptford, NJ 08096-2088

Canadian Orders

For Canada inquiries, please call one of these toll-free numbers for information about accessories:

English: 1 – 800 – 668 – 5518
French: 1 – 800 – 668 – 5507

International Orders

This offer is valid only in the 50 United States. For international orders, please send your request for a price quotation (not an order) to:

International Customer Service
Thomson Consumer Electronics, Inc.
Distributor & Special Products
2000 Clements Bridge Rd
Deptford, NJ USA 08096-2088

First-Time Operation

Thank you for choosing an RCA camcorder.

You have selected a precision-engineered camcorder designed to give you years of performance and enjoyment.

Although your camcorder is very simple to use, it is important that you read and carefully follow the instructions in this manual until you are completely familiar with the proper operating procedures.

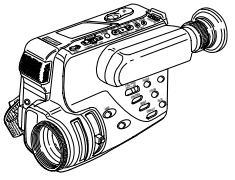
If you should experience a problem, always refer first to *"Trouble Checks" on pages 64-66*. Many times a simple solution is all that is needed, and it could save you a costly service call. If your camcorder should require service during the warranty period, *refer to page 68* for a description of what we will do and instructions on how to request service.

---

1. Unpack the camcorder and accessories.

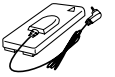
Make sure you remove all the accessories and information papers that came packed with the camcorder.

- Save the packing materials and box in case you ever need to ship or store your camcorder.
- The items shown below are packed with your camcorder. If any of the items are missing or appear damaged, contact your RCA dealer immediately.

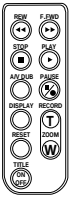


Camcorder:
Model Pro867 or Pro870

AC Adapter/Charger
Stock No. CPS80



Power Connector
Stock No. 203361

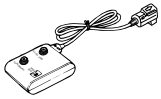


Remote Control
Stock No. 211028

Rechargeable
6-Volt Battery
Stock No. BB060

WARNING: NICKEL CADMIUM BATTERY MUST BE DISPOSED OF PROPERLY.

Audio/Video
Output Cable
Stock No. VAA011



RF Output Adapter
Stock No. CRF80

Coaxial RF Cable
Stock No. 177233

Shoulder Strap
Stock No. 212473

Clock and Remote Control Batteries: 3-Volt Micro Lithium Cells (such as Maxell No. CR2025 available from most local drug stores and camera shops)

Caution: Lithium batteries. Must be disposed of properly.

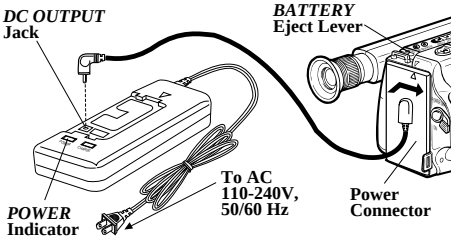
Never handle punctured or leaking batteries. May cause burns or personal injury.

Can cause death or injury if swallowed.

Keep out of hands of children. If swallowed, consult a physician immediately for emergency treatment.

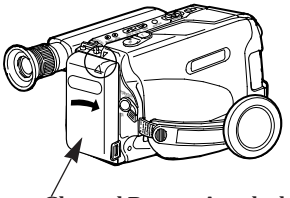
2. Attach a power supply to the camcorder.

Attach a power supply to the camcorder–either the adapter/charger or charged battery.



Adapter/Charger: Connect the power connector's small plug into the *DC OUTPUT* jack on the adapter/charger. Align the reference arrow on the power connector with the arrow on the camcorder. Hold the power connector flush against the back of the camcorder, and slide it in the direction of the arrow *as shown*. Plug the adapter/charger's plug into an operating outlet. *Details are on page 20.*

Charged Battery:*

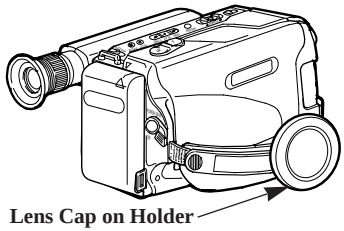


Charged Battery Attached to Camcorder

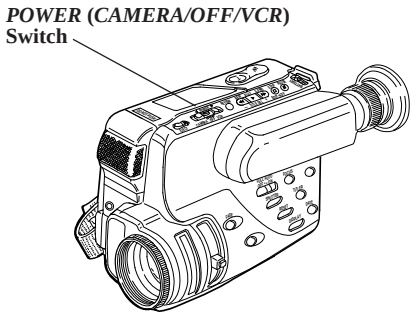
Match the arrow on the battery to the arrow on the camcorder. Hold the battery flush against the camcorder and slide it in the direction of the arrow. *Details are on pages 21-22.*

***** The battery must be charged before it can be used the first time.

3. Remove the lens cap and attach it to the lens cap holder on the handstrap.

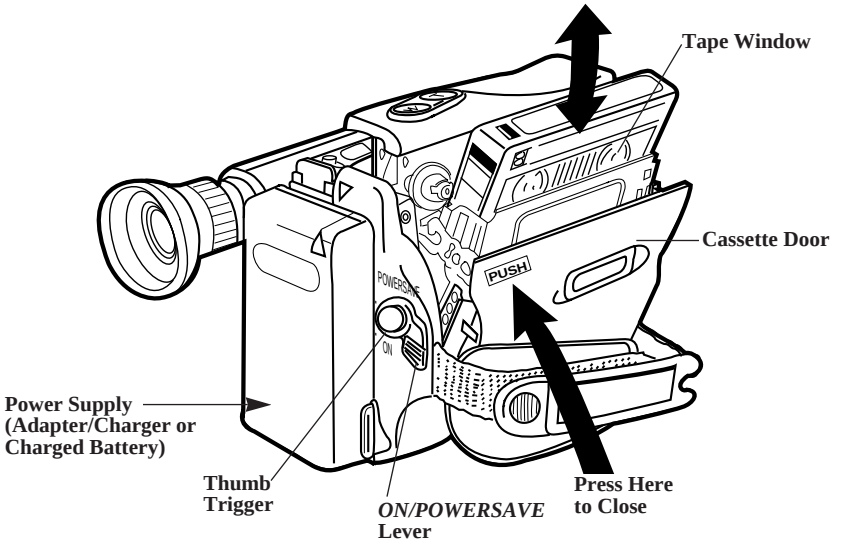


4. Turn on the camcorder.



Because your camcorder is both a camera and a VCR, it performs two completely separate groups of functions. The position of the *POWER (CAMERA/OFF/VCR)* switch tells the camcorder whether you want to record (*CAMERA*), play back tapes (*VCR*), or turn off the camcorder's power (*OFF*). Some of the controls operate differently depending on the position of the *POWER* switch.

- Press and hold the small button on the *POWER* switch while sliding it to the *CAMERA* position.



5. Place the *ON/POWERSAVE* lever in the *ON* position.

The camcorder also has an *ON/POWERSAVE* lever to conserve battery power when recording.

- During recording, place the *ON/POWERSAVE* lever in the *ON* position. The camcorder will not record unless this lever is in the *ON* position.
- Place the *ON/POWERSAVE* lever in the *POWERSAVE* position during recording breaks. The camcorder will enter the "standby mode".

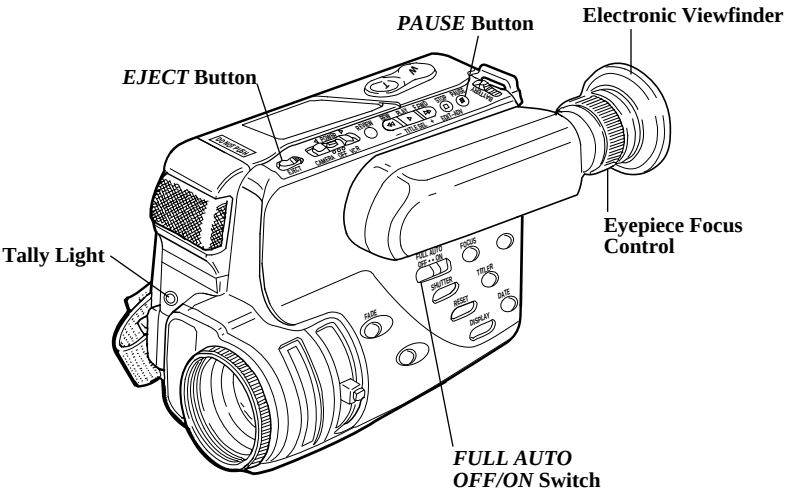
Important Note: The *DEW* indicator will flash in the electronic viewfinder when there is excessive moisture in the camcorder. Leave the camcorder's power on. When the *DEW* indicator stops flashing, the camcorder is ready to operate.

6. Insert a cassette in the camcorder.

Insert a cassette by sliding the *EJECT* button to open the cassette compartment. Insert the cassette only one way with the record-protect (safety) tab facing up and the tape window facing out. Gently close the cassette compartment door with your hand. The top will close automatically. **Do not push the top down or you may damage your camcorder.** *Details are on page 27.*

7. Set the camcorder's controls to their automatic positions.

- Place the *FULL AUTO OFF/ON* switch in the *ON* position.



8. Adjust the eyepiece focus control for your vision.

If the image in the viewfinder is blurry, adjust the eyepiece focus control for your vision. *Details are on page 34.*

9. Start and stop recording.

Start and stop recording by pressing and releasing the thumb trigger. You do not have to hold the thumb trigger to record. The tally light will light when the camcorder is recording.

Notes: Pressing the *PAUSE* button will also start and stop the camcorder recording.

If you do not record within five minutes, the camcorder will automatically shut off to prevent excessive tape wear.

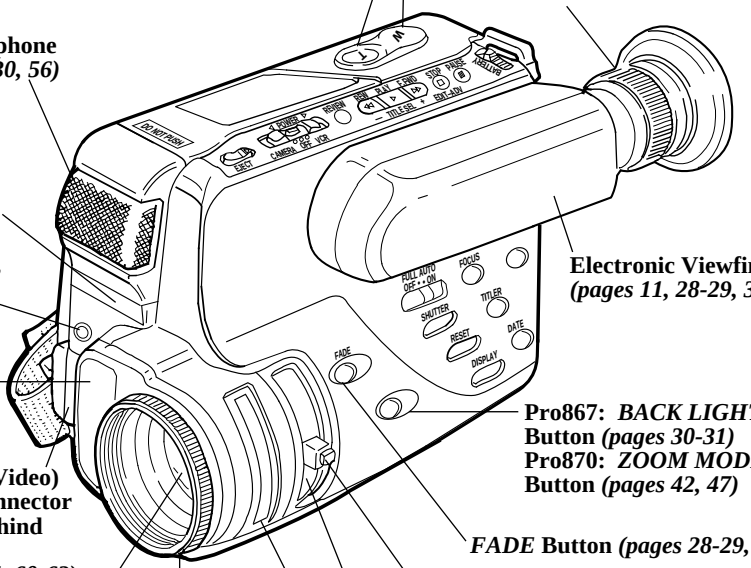
Any material recorded on the tape will automatically be erased if you record over it.

10. Play back what you have recorded.

- Press the thumb trigger to stop recording.
- Place the *POWER* switch in the *VCR* position.
- Press the *REW* (rewind) button to rewind the tape.
- Then press the *PLAY* button to play back the tape in the electronic viewfinder.
- Press the *STOP* button when you are finished playing back the tape.
- *Details on viewfinder playback are on page 59.*

11. Review all the camcorder's operating controls.

The page number(s) where detailed information on each control can be found are listed for your convenience.



Power Zoom Buttons
***T* = Telephoto**
***W* = Wide Angle**
(pages 28-29,46-47)

Eyepiece Focus Control
(pages 11, 28-29, 34)

Microphone
(page 30, 56)

Remote Control Sensor
(page 17)

Tally Light
(pages 10-11, 30-31)

Auto-Focus Window
(pages 36-37, 56)

***AV* (Audio/Video) *IN/OUT* Connector (Located behind small cover)**
(pages 50-55, 60-63)

Lens Hood
(page 57)

Lens *(page 58)*

Electronic Viewfinder
(pages 11, 28-29, 34, 59)

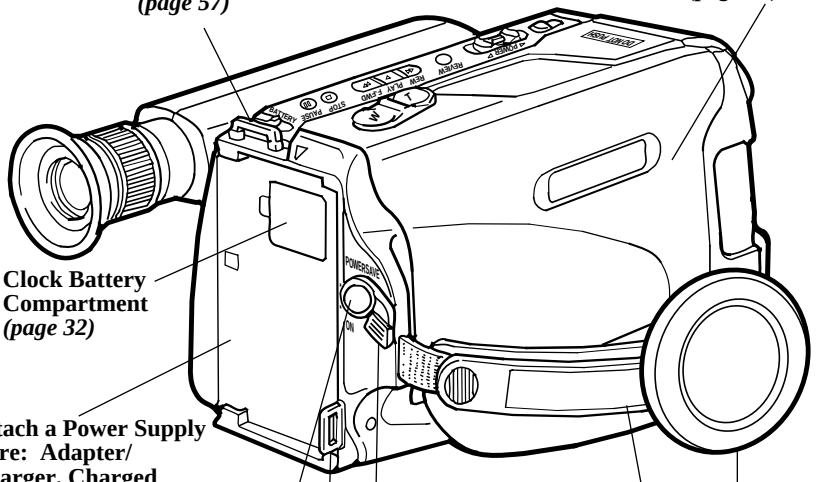
Pro867: *BACK LIGHT* Button *(pages 30-31)*
Pro870: *ZOOM MODE* Button *(pages 42, 47)*

FADE* Button *(pages 28-29, 35)

Macro Focus Button *(pages 36-37)*

Zoom Ring *(pages 36-37, 46)*

Focus Ring *(pages 36-37)*



Shoulder Strap Attachment Ring ***(page 57)***

Cassette Door ***(page 27)***

Clock Battery Compartment ***(page 32)***

Attach a Power Supply Here: Adapter/ Charger, Charged Battery, or Optional DC Car Cord ***(pages 20-25)***

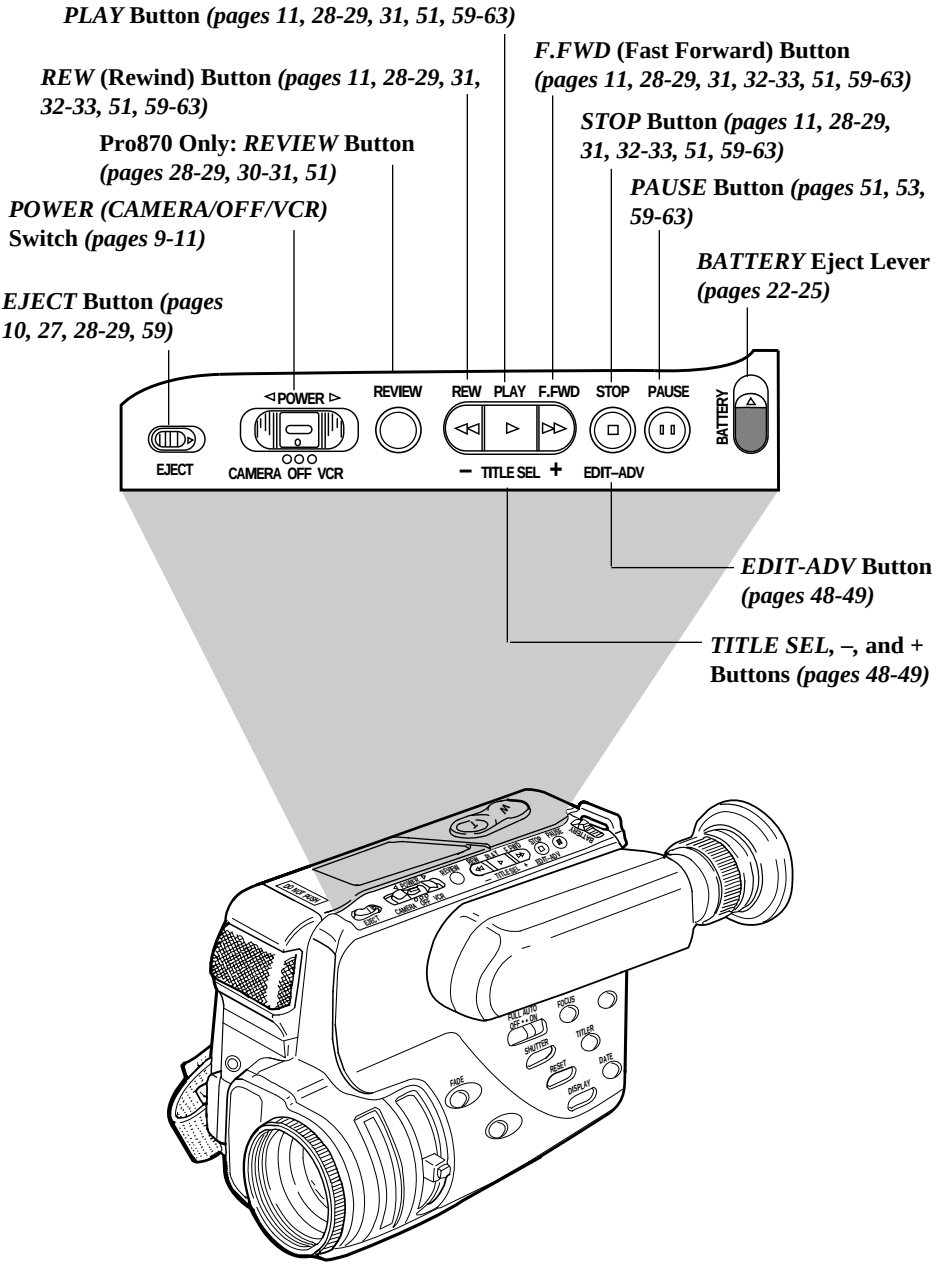
Thumb Trigger (Record Start/Stop Button) ***(pages 10-11, 28-29)***

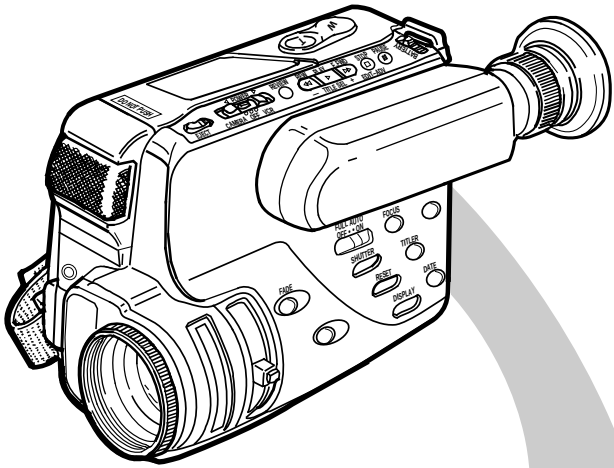
ON/POWERSAVE* Lever** ***(pages 10-11, 21, 28-29)

Lens Cap Attached to Handstrap ***(pages 10-11, 28-29, 58)***

Handstrap ***(pages 10-11, 28-29)***

Shoulder Strap Attachment Ring ***(page 57)***

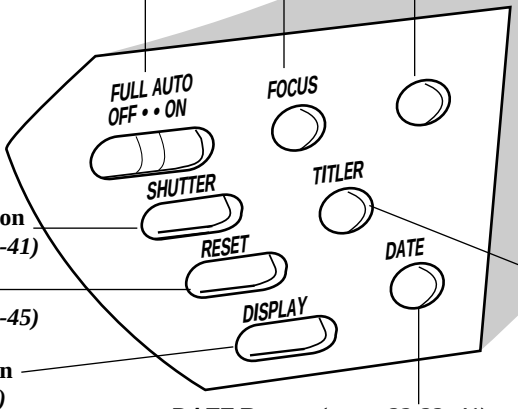

PLAY Button (pages 11, 28-29, 31, 51, 59-63)
F.FWD (Fast Forward) Button (pages 11, 28-29, 31, 32-33, 51, 59-63)
REW (Rewind) Button (pages 11, 28-29, 31, 32-33, 51, 59-63)
STOP Button (pages 11, 28-29, 31, 32-33, 51, 59-63)
Pro870 Only: REVIEW Button (pages 28-29, 30-31, 51)
PAUSE Button (pages 51, 53, 59-63)
POWER (CAMERA/OFF/VCR) Switch (pages 9-11)
BATTERY Eject Lever (pages 22-25)
EJECT Button (pages 10, 27, 28-29, 59)
POWER
REVIEW
REW
PLAY
F.FWD
STOP
PAUSE
BATTERY
EJECT
CAMERA OFF VCR
– TITLE SEL +
EDIT–ADV
EDIT-ADV Button (pages 48-49)
TITLE SEL, –, and + Buttons (pages 48-49)



Pro867: ***REVIEW*** **Button** ***(pages 28-29,30-31, 51)***
Pro870: ***BACK LIGHT*** **Button** ***(pages 30-31)***

FOCUS **Button** ***(pages 36-37)***

FULL AUTO OFF/ON **Switch** ***(pages 10-11, 28, 30, 36-37, 38-39, 40-41)***



SHUTTER **Button** ***(pages 38-39, 40-41)***

RESET **Button** ***(pages 42-43, 44-45)***

DISPLAY **Button** ***(pages 23, 40-45)***

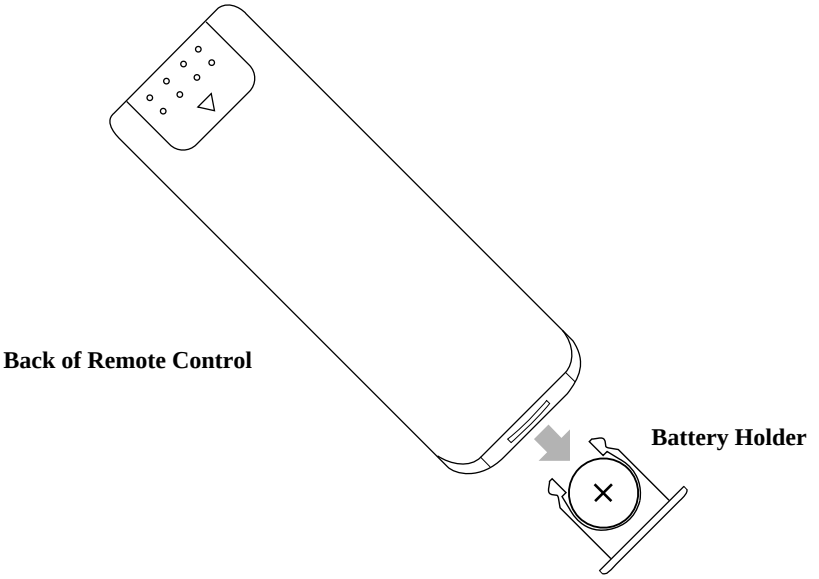
TITLER **Button** ***(pages 48-49)***

DATE **Button** ***(pages 32-33, 41)***

Remote Control

Battery Installation

The battery supplied with your remote control is packed separately. Install it as follows:



1. Turn the remote control over, and pull on the tab to remove the battery holder.
2. Insert the battery so that its positive (+) terminal faces up.
3. Replace the battery holder in the remote control.

Notes: Never place anything heavy on top of the remote control or lay it upside-down. This may accidentally depress the buttons for a long time and discharge the battery.

Replace the battery when the camcorder fails to respond to the remote control.

Remove the battery from the remote control if it will not be used for a month or more. This will prevent possible damage from battery leakage. If leakage occurs, wipe up the liquid inside the compartment and replace the battery.

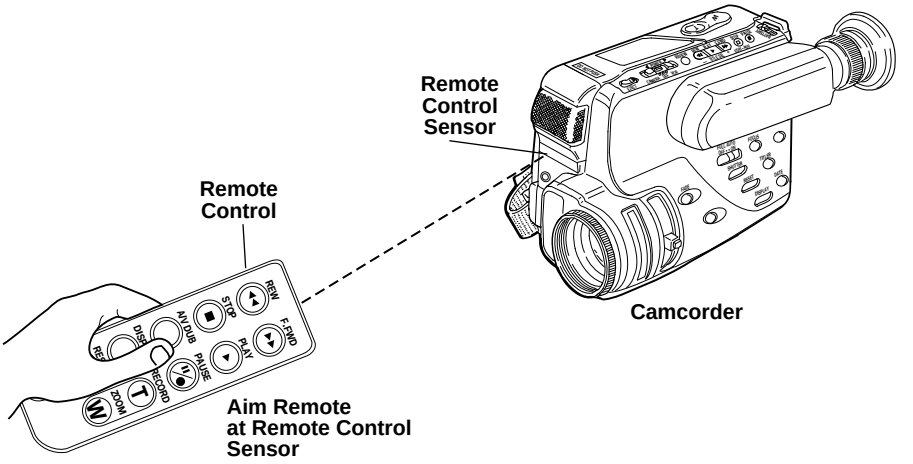
Caution: Lithium battery. Must be disposed of properly.

Never handle punctured or leaking batteries. May cause burns or personal injury.

Can cause death or injury if swallowed.

Keep out of the hands of children. If swallowed, consult a physician immediately for emergency treatment.

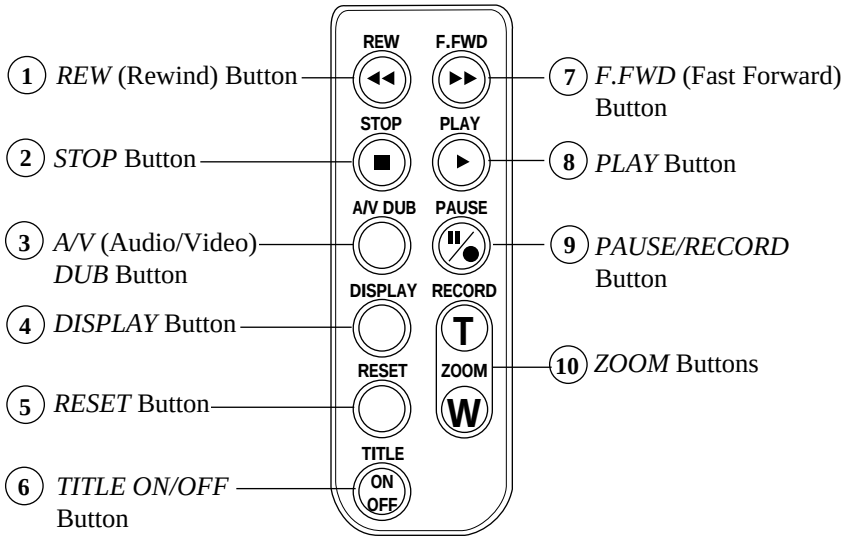
Remote Control Sensor



The remote control operates the camcorder by infrared light, so it is protected from electrical and sound interference. However, the remote control must be aimed directly at the camcorder's remote control sensor. There cannot be any obstructions between them.

Note: The camcorder may not respond to the remote control if the camcorder's remote control sensor is exposed to direct sunlight or strong artificial light.

Location and Function of Remote Control Buttons



A brief description of the functions of the remote control buttons is given here. They perform the same function as the corresponding controls on your camcorder. You can use whichever is more convenient at the time.

Note: An RCA VCR that is set to respond to the *VCR 2* button on the VCR's remote control may respond to this remote control when it is used to operate the camcorder.

(1) *REW* (Rewind) Button

- Press the *REW* button when the camcorder's *POWER* switch is in the *VCR* position to rewind the tape.
- Press and hold the *REW* button during playback (camcorder's *POWER* switch in the *VCR* position) to visually search the tape in reverse at a higher speed. Release the *REW* button to return to normal playback.
- Press and hold the *REW* button when the camcorder's *POWER* switch is in the *CAMERA* position to visually search the recorded material in reverse. When you release the *REW* button, the camcorder will stop playing and prepare to record at that point on the tape.

(2) *STOP* Button

- Press this button, when the camcorder's *POWER* switch is in the *VCR* position to stop playback, rewinding, or fast forwarding.
- The *STOP* button has no effect when the camcorder's *POWER* switch is in the *CAMERA* position. To stop recording, press the *PAUSE/RECORD* button.

Remote Control (continued)

(3) *A/V* (Audio/Video) *DUB* Button

- This button is used to record new audio and video in place of existing audio and video on a recorded tape. *Details are on pages 52-53.*

(4) *DISPLAY* Button

- Press this button to display the battery level indicator, time counter or time-remaining display in the viewfinder. *Details are on pages 23, 40-45.*

(5) *RESET* Button

- Press the *RESET* button when the time counter appears in the viewfinder to set it back to "*0:00:00*". *Details are on pages 43-44.*
- Press the *RESET* button when the time-remaining display appears in the viewfinder to display the correct tape size. *Details are on pages 43* and *45.*

(6) *TITLE ON/OFF* Button

- Press the *TITLE ON/OFF* button to display the titler graphics in the viewfinder. *Details are on pages 48-49.*

(7) *F.FWD* (Fast Forward) Button

- Press the *F.FWD* button when the camcorder's *POWER* switch is in the *VCR* position to fast forward the tape.
- Press and hold the *F.FWD* button during playback (camcorder's *POWER* switch in *VCR*) to visually search the tape forward at a higher speed. Release the *F.FWD* button to return to normal playback.
- Press and hold the *F.FWD* button when the camcorder's *POWER* switch is in the *CAMERA* position to visually search the recorded material forward. When you release the *F.FWD* button, the camcorder will stop playing, and prepare to record at that point on the tape.

(8) *PLAY* Button

- Press the *PLAY* button when the camcorder's *POWER* switch is in the *VCR* position to begin playback.
- Press and hold the *PLAY* button when the camcorder's *POWER* switch is in the *CAMERA* position to view the recorded material at normal speed. When you release the *PLAY* button, the camcorder will stop playing and prepare to record at that point on the tape.

(9) *PAUSE/RECORD* Button (Same as Thumb Trigger and *PAUSE* Button on Camcorder)

- Press and release the *PAUSE/RECORD* button when the *POWER* switch is in the *CAMERA* position to start and stop recording.

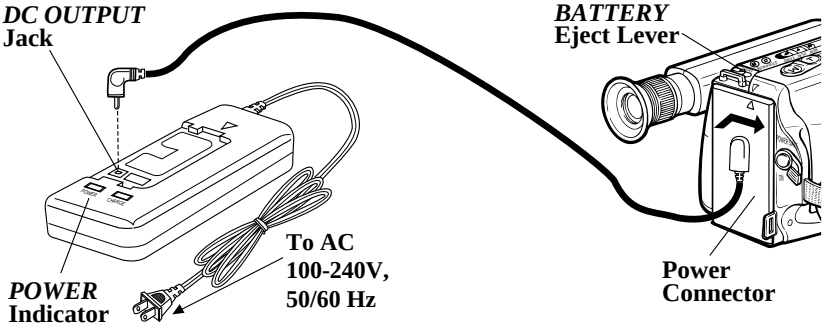
  Note: The camcorder's *ON/POWER-SAVE* lever must be in the *ON* position for the camcorder to record.
- Press the *PAUSE/RECORD* button during playback (camcorder's *POWER* switch in the *VCR* position) to produce a stop-action picture. Press the *PAUSE/RECORD* button again to return to normal playback.

(10) *ZOOM (W* and *T)* Buttons

- Press and hold the *W ZOOM* button to move the lens in the wide-angle direction.
- Press and hold the *T ZOOM* button to move the lens in the telephoto direction.
- *Details are on pages 46-47*

Powering Your Camcorder

Using the Adapter/Charger to Power Your Camcorder



The adapter/charger's power connector attaches to the camcorder, and lets you power your camcorder directly from standard household power. The adapter/charger operates on 100-240 volts, 50/60 Hz, so it can be used virtually anywhere in the world to power the camcorder or recharge the battery. You may need a plug adapter in some countries. Consult your RCA dealer. Be sure to purchase the plug adapter before traveling. The adapter can be hard to find in foreign countries.

To Attach the Adapter/Charger

1. Connect the power connector's small plug into the *DC OUTPUT* jack on the adapter/charger.
2. Align the reference arrow on the power connector with the arrow on the camcorder.
3. Hold the power connector flush against the back of the camcorder, and slide it to the right in the direction of the arrow as shown.
4. Plug the adapter/charger's plug into the nearest AC outlet (100-240V, 50/60Hz).
5. If the adapter/charger is properly connected, its *POWER* indicator will light.

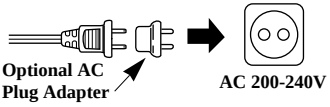
Note: The battery level indicator may display when using the adapter/charger to power the camcorder. This indicator is used for battery operation and has no meaning when using other methods to power the camcorder.

To Remove the Adapter/Charger

1. Unplug the adapter/charger from the wall outlet.
2. Slide and hold the *BATTERY* eject lever on the camcorder while sliding the power connector to the left and off the camcorder.

Using an optional plug adapter

An optional plug adapter may be required in some countries.



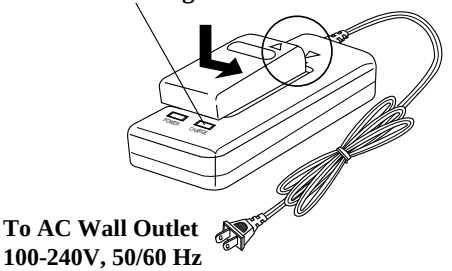
1. Plug the adapter/charger's plug into the AC plug adapter.
2. Plug the AC plug adapter into an AC outlet.

Using the Battery to Power Your Camcorder

The battery must be charged before it can be used the first time. Initial charging will take approximately one hour. When fully charged, the battery should supply about 45-60 minutes of operating time (depending on how much you use zoom and pause).

When using the battery to power the camcorder, place the *ON/POWERSAVE* lever in the *POWERSAVE* position during recording breaks to conserve the battery's power. Place it back in the *ON* position when you are ready to resume recording.

Note: The small marker switch on the top of the battery is for use as a personal reminder to help you remember to recharge the battery. It has no other function.



Caution: When a battery is attached to the adapter/ charger, do not turn them upside down. The battery may fall off and be damaged or cause injury.

Charging the Battery

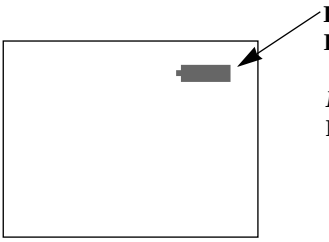
If the power connector is attached to the adapter/charger, remove its plug.

1. Align the reference arrow on the battery with the arrow on the adapter/charger.
2. Hold the battery flush against the adapter/charger and slide it in the direction of the arrow.
3. Plug the adapter/charger into the nearest AC outlet (100-240V, 50/60Hz).
4. If the battery is properly connected, the adapter/charger's *CHARGE* indicator will light. When the light goes out, the battery is fully charged.

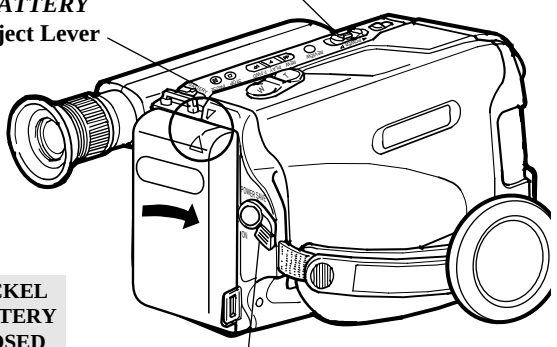
   Notes: If the *POWER* indicator on the AC adapter/charger starts flashing, remove the adapter/charger's plug from the AC outlet for about 30 seconds. Then reattach it. If after several attempts, the indicator continues to flash, this means your battery can not take a charge and must be replaced with a new one.

   The *POWER* indicator will also flash if a hot battery is attached to the AC adapter/charger. Attaching an extremely hot battery is not recommended. The battery should be allowed to cool down before being attached.
5. Remove the charged battery by sliding it off the adapter/charger.
6. Attach the charged battery to the camcorder *as shown on the next page*.

(continued on next page)



Display in Viewfinder



WARNING: NICKEL CADMIUM BATTERY MUST BE DISPOSED OF PROPERLY.

Attaching the Charged Battery to the Camcorder

If the power connector is attached to the camcorder, remove it before attaching the battery.

1. Align the reference arrow on the battery with the arrow on the back of the camcorder.
2. Hold the battery flush against the camcorder and slide it in the direction of the arrow.
3. Slide the camcorder's *POWER* switch to the *CAMERA* position, and place the *ON/POWERSAVE* lever in the *ON* position.

Removing the Battery From the Camcorder

Slide and hold the *BATTERY* eject lever on the camcorder while sliding the battery to the left and off the camcorder.

Battery Safety Precautions

Do not short the battery's terminals.

Do not attempt to disassemble or modify the battery. There are no user-serviceable parts inside.

Use the battery only with specified RCA adapter/chargers and camcorders.

Checking Battery Power (Battery Level Indicator)

The battery level indicator in the camcorder's viewfinder shows how much recording time is left on the battery.

Press the *DISPLAY* button on the camcorder to display the battery level indicator in the viewfinder. The battery level indicator will not be recorded on the tape when it appears in the viewfinder.

- When the battery is fully charged, the display shows in the viewfinder.
- After several minutes, the display shows .
- When the battery level display starts flashing, it is time to recharge the battery.

Caution: When the battery reaches its empty level while you are using it, the camcorder will shut off. However, the battery should have enough reserve power to eject the cassette when you slide the *EJECT* button. If the camcorder does not eject the cassette when you slide the *EJECT* button, do not attempt to force the cassette door open. This will damage the camcorder. Power your camcorder with the adapter/charger, or recharge the battery before attempting to eject the cassette.

Proper Care and Storage of Your Battery

The battery will provide better service and longer performance if you charge it before use and store it at normal room temperature.

The nickel cadmium battery will provide better service if it is occasionally used until it reaches the empty level (camcorder automatically turns off) before recharging.

The battery should be charged at a temperature of 32°F-95°F (0°C-35°C) to prevent damage.

Do not operate the battery at temperatures below 14°F (–10°C) or above 95°F (35°C). The battery may be damaged if operated at temperatures above 122°F (50°C). Operation time will decrease at extremely low temperatures.

After repeated chargings and use, the operation time will gradually decrease. When operation time becomes too short to be useful, it is time to replace the battery.

(continued on next page)

Using the Optional RCA DC Car Cord Adapters

The optional RCA DCC06 DC car cord and DCC80 DC car cord adapter/charger allow you to power your camcorder from the cigarette lighter socket of a car, truck, or RV. They convert 24- and 12-volts to a 6-volt output. The DCC80 can also charge the battery that came with your camcorder and the BB120 (long play) battery.

Notes: Consult the installation and operating instructions enclosed with the DCC06 or DCC80 for complete operating instructions.

When using the DCC06 or DCC80 to power the camcorder, your vehicle's engine does not have to be turned on.

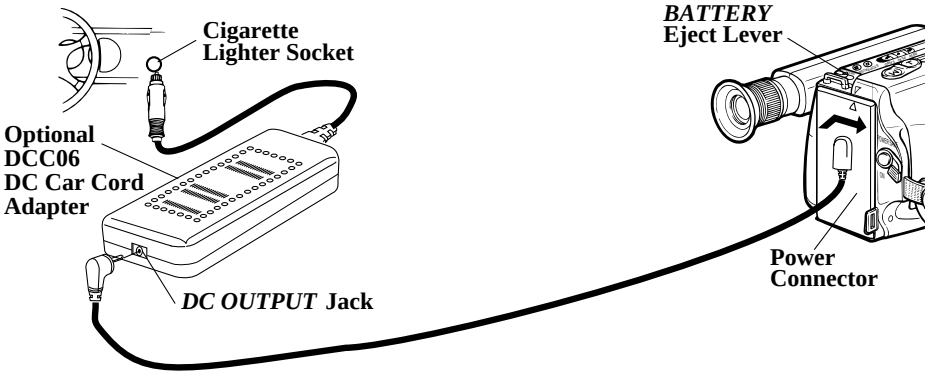
When using the DCC06 or DCC80 to power the camcorder, the battery level indicator may display . This indicator is used for battery operation and has no meaning when using other methods to power the camcorder.

Optional accessories are shown on pages 1-7.

Cautions: The DCC06 and DCC80 are designed to be used only with vehicles having negative ground electrical systems.

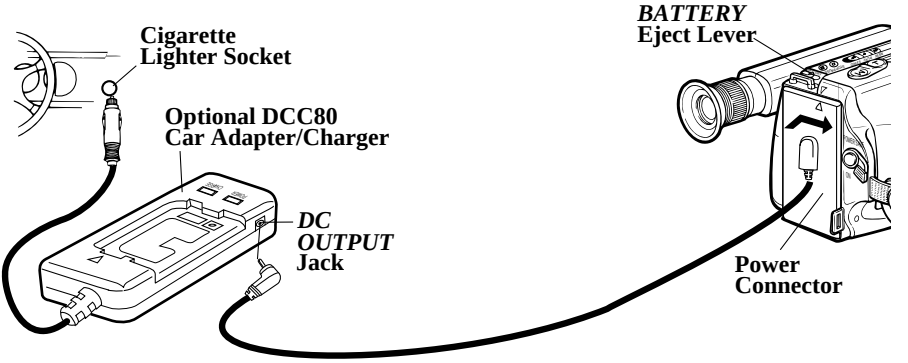
Do not use RCA car cords DCC07, DCC71, DCC012 or DCC096 with this camcorder. They are not capable of converting 12-volts to 6-volts and will damage your camcorder.

Using the RCA DCC06 DC Car Cord Adapter to Power the Camcorder



1. If the battery is attached to the camcorder, remove it.
2. Align the reference arrow on the power connector with the arrow on the camcorder.
3. Hold the power connector flush against the back of the camcorder and slide it to the right in the direction of the arrow as shown.
4. Insert the power connectors's small plug into the *DC OUTPUT* jack of the DC car cord.
5. Insert the plug on the DC car cord into the vehicle cigarette lighter's socket.
6. Slide the camcorder's *POWER* switch to the *CAMERA* position and place the *ON/POWERSAVE* lever in the *ON* position.

Using the RCA DCC80 DC Car Cord Adapter/Charger to Power the Camcorder



1. If the battery is attached to the camcorder, remove it.
2. Align the reference arrow on the power connector with the arrow on the camcorder.
3. Hold the power connector flush against the back of the camcorder and slide it to the right in the direction of the arrow as shown.
4. Insert the power connector's small plug into the *DC OUTPUT* jack on the DC car cord adapter/charger.
5. Insert the plug on the DCC80 into the vehicle's cigarette lighter socket.
6. Slide the camcorder's *POWER* switch to the *CAMERA* position and place the *ON/POWERSAVE* lever in the *ON* position.

Using the RCA DCC80 DC Car Cord Adapter/Charger to Charge a Battery

1. If the power connector's plug is attached to the adapter/charger's *DC OUTPUT* jack, remove it. The adapter/charger can not charge a battery and power the camcorder at the same time.
2. Attach the battery to the adapter/charger as shown.
3. The *CHARGE* indicator will light while the battery is being charged. When the *CHARGE* indicator turns off, the battery is charged.

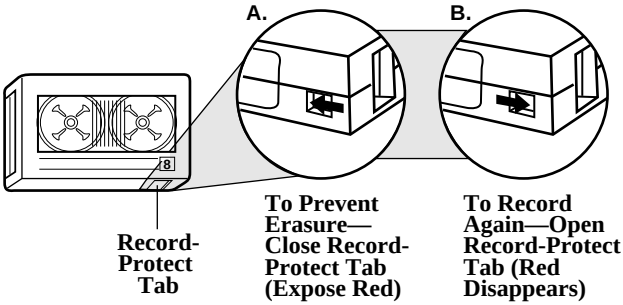
RCA Video Cassettes

We recommend that RCA cassettes be used with your camcorder. The tape in these cassettes is of high-quality formulation. It has been manufactured to our critical specifications for excellent performance. Use of tape not meeting these specifications could considerably reduce the performance of your camcorder.

Use of poor quality tapes or tapes that have been damaged or mishandled can contaminate the video heads, resulting in a snowy picture or no picture at all during playback. Because there is no control over the type of tape purchased or rented by consumers, head cleaning is not covered under warranty. It is considered normal maintenance.

Erase Protection–Record-Protect (Safety) Tab

You can use your video cassettes over and over again. To erase a previous recording, just record over it.



A. To prevent erasing a recording you want to keep, close the cassette's record-protect tab by sliding it in the direction of the arrow until the red area is completely visible.

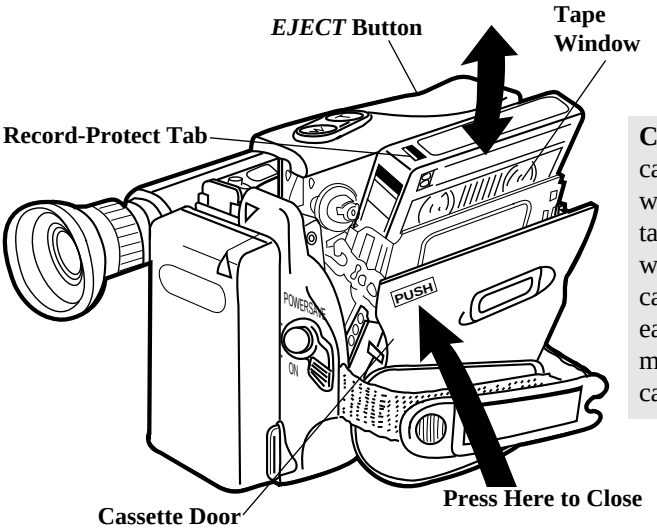
B. To record again on the cassette, slide the record-protect tab open in the direction of the arrow until the red area disappears behind the cassette case.

Recording Speed and Times

The camcorder records and plays back in standard speed (SP). Listed below are the maximum SP recording times for some popular 8mm cassettes.

Cassette	Recording Time
P6-15	15 Minutes
P6-20	20 Minutes
P6-45	45 Minutes
P6-60	60 Minutes
P6-90	90 Minutes
P6-120	2 Hours
P6-150	2 1/2 Hours

Inserting and Removing Cassettes



Caution: Insert the cassette only one way with the record-protect tab facing up and the tape window facing out. The cassette should slide easily into the compartment. Do not force the cassette.

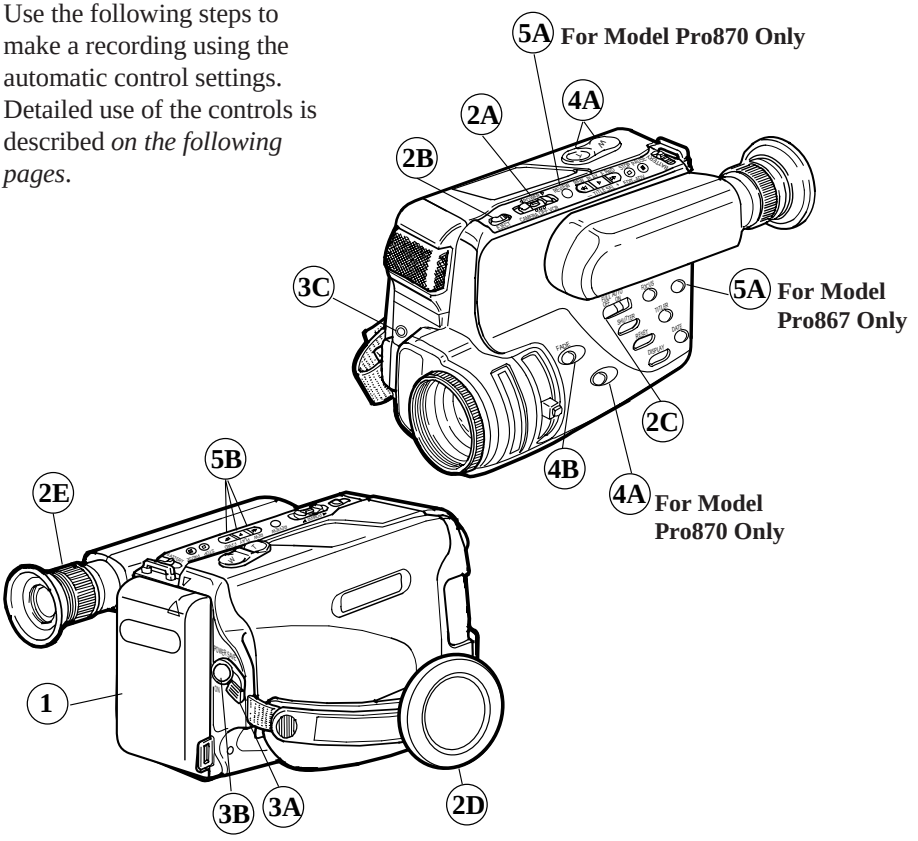
1. Attach a power supply to the camcorder, and slide and release the *EJECT* button to open the cassette compartment.
2. Insert or remove the cassette.
3. Gently close the cassette compartment door with your hand. The camcorder will automatically close the top of the cassette compartment. **Do not push the top down or you may damage your camcorder.**

Cassette Care and Storage

- When you are finished with a cassette, rewind it, and remove it from the camcorder.
- When you are finished recording, close the cassette's record-protect (safety) tab to prevent accidental erasure.
- Label your cassettes before storing them.
- Store cassettes vertically in their protective boxes at normal room temperatures. Do not leave your camcorder or cassettes in a car or outdoors for an extended period. Excessive heat or cold may damage your cassettes.
- Do not touch or cover the small holes in the cassette or use cassettes with damaged or spliced tape.
- Keep dust from entering the cassette compartment. All dust is abrasive and will cause excessive wear on the tape and the camcorder's recording or playback heads.
- Keep the cassette away from strong magnetic fields such as electric motors and other devices.
- Do not use a cassette if it has been damaged or exposed to moisture. The tape may jam and/or damage your camcorder.

Detailed Recording Steps

Use the following steps to make a recording using the automatic control settings. Detailed use of the controls is described *on the following pages*.



(1) Attach a power source to the camcorder.

Detailed Instructions for attaching the adapter/charger, battery, or optional DC car cords are on *pages 20-25*.

(2) Prepare the camcorder to record.

A. Press and hold the small button on the *POWER* switch while sliding it to the *CAMERA* position.

B. Insert a cassette.

1. Slide and release the *EJECT* button to open the cassette door.
2. Insert a cassette *as shown on page 27*. Insert the cassette only one way with the record-protect tab facing up and the tape window facing out.
3. Gently close the cassette door with your hand. The camcorder will automatically close the top of the cassette compartment. **Do not push the top down or you may damage your camcorder.**

C. Place the *FULL AUTO OFF/ON* switch in the *ON* position.

D. Remove the lens cap and attach it to the lens cap holder on the hand strap.

(continued on next page)

E. If the picture in the viewfinder is blurry, adjust the eyepiece focus control.

③ Start Recording

A. Place the *ON/POWERSAVE* lever in the *ON* position. The camcorder will not record if this lever is in the *POWERSAVE* position.

B. Press the camcorder's thumb trigger to start and stop recording. You do not have to hold the thumb trigger to record.

Note: Use the thumb trigger for brief recording pauses. If you plan to pause recording for a longer period, place the *ON/POWERSAVE* lever in the *POWERSAVE* position. This will conserve the battery's power.

If you do not record within five minutes, the camcorder will automatically shut off to prevent excessive tape wear.

C. The tally light on the front of the camcorder lights when the camcorder is recording.

④ Using the camcorder's special recording features

A. Zoom in and out.

1. Press the power zoom button "*T*" to zoom in on a subject, or press "*W*" to zoom away from a subject.
2. Pro870 only: Repeatedly press the *ZOOM MODE* button to use the special zooming features or 16 x 9 mode. *Details are on page 47.*

B. Fade in and out of scenes.

1. To fade into the scene you want to record, press and hold the *FADE* button. Then press the thumb trigger to start recording. Release the *FADE* button after a few seconds.
2. To fade out while recording, press and hold the *FADE* button. Then press the thumb trigger to stop recording. After the recording stops, release the *FADE* button.

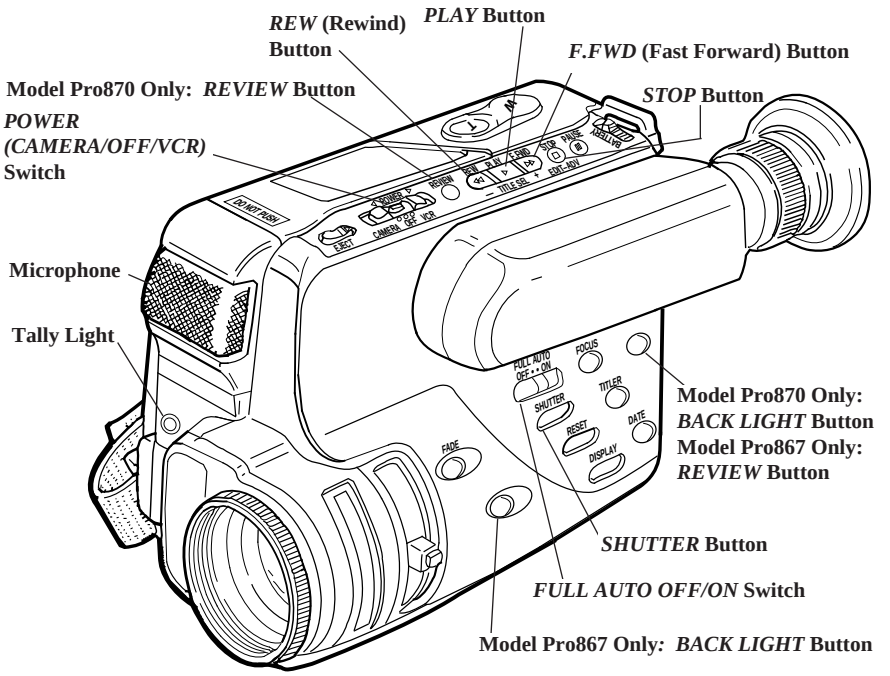
⑤ Reviewing the tape while recording

A. Quick Review: Press the *REVIEW* button from the record-pause mode to quickly review the last few seconds of recorded material.

B. Edit Search: Use the *F.FWD* (fast forward), *REW* (rewind), and *PLAY* buttons on the camcorder *as described on page 31* to visually search what you have recorded.

When you have finished recording

1. Press the thumb trigger to stop the camcorder from recording.
2. If you want to rewind the tape to the beginning, slide the *POWER* switch to the *VCR* position. Then press the *REW* (rewind) button on the camcorder to rewind the tape.
3. Slide and release the *EJECT* button to open the cassette door. Remove the cassette and gently close the door with your hand.
4. Place the *POWER* switch in the *OFF* position to turn off the camcorder.



Flying Erase Head

A separate erase head is mounted on the spinning headwheel (hence the term "flying").

This allows you to make clean edits without the "glitches" or "rainbow noise" that may occur at the beginning and end of each recording.

Microphone

The microphone picks up the sound during a recording. It is more sensitive to sounds coming from the direction the lens is pointed.

FULL AUTO OFF/ON Switch

When the *POWER* switch is in the *CAMERA* position, place the *FULL AUTO OFF/ON* switch in the *ON* position to have the camcorder automatically control the focus and set the shutter speed to 1/60 second. The camcorder will automatically focus on the nearest object and select the normal shutter speed (1/60 second).

Notes: When the *FULL AUTO OFF/ON* switch is in the *ON* position, *FULL AUTO* appears in the viewfinder when you press the *DISPLAY* button. *Details are on page 40.*

Shutter speeds can still be selected by pressing the *SHUTTER* button when the *FULL AUTO OFF/ON* switch is in the *ON* position. *Details are on page 39.*

Edit Search

The edit search feature allows you to use the *F.FWD* (fast forward), *REW* (rewind), and *PLAY* buttons on the camcorder (or remote) control to precisely position the tape while the camcorder is in the record-pause mode.

- Press and hold the *REW* (rewind) button to visually search the recorded tape in reverse.
- Press and hold the *F.FWD* (fast forward) button to visually search forward on the recorded tape.
- Press and hold the *PLAY* button to view the recorded tape at normal speed.

When you release the buttons, the camcorder will return to the record-pause mode at that point on the tape.

Quick Review

Press the *REVIEW* button when the camcorder is in the record-pause mode to review the last few seconds of a recording.

The camcorder will play back the last few seconds of the recording, return the tape to its previous position, and return to the record-pause mode.

Tally Light

The tally light on the front of the camcorder lights when the camcorder is recording.

Tape Positioning

When the *POWER* switch is in the *VCR* position and the camcorder is stopped, you can quickly fast-forward or rewind the tape.

- Press the *F.FWD* (fast-forward) button to fast-forward the tape. Press the *STOP* button to stop fast-forwarding.
- Press the *REW* (rewind) button to rewind the tape to the beginning. Press the *STOP* button to stop rewinding.

BACK LIGHT Button

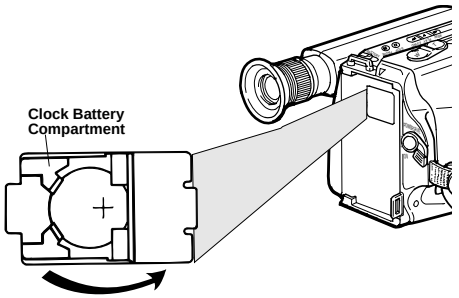
The *BACK LIGHT* button adjusts the amount of light that enters the camcorder. When the *POWER* switch is in the *CAMERA* position, press and hold the *BACK LIGHT* button to let more light enter the camcorder. Some examples when you may want to add more light are:

- When the subject is darker than the surrounding scene.
- When the background is bright, but your subject appears too dark. (For example, a person standing in front of a window.)
- When the subject you are recording is in a shadowed area.

Release the *BACK LIGHT* button when lighting conditions return to normal.

Date and Time Display

Installing the Battery for Time and Date Display



Caution: Lithium battery. Must be disposed of properly.

Never handle punctured or leaking batteries. May cause burns or personal injury.

Can cause death or injury if swallowed.

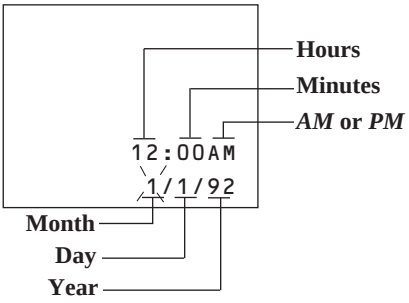
Keep out of the hands of children. If swallowed, consult a physician immediately for emergency treatment.

1. Locate the *CLOCK BATTERY* compartment on the back of the camcorder.
2. Pull the tab to the side to open the cover and expose the clock battery compartment.
3. Insert the clock battery with the "+" terminal facing out *(as illustrated inside the battery compartment cover).*
4. Gently push the cover closed until it snaps into place.

Setting the Time and Date Display in the Viewfinder

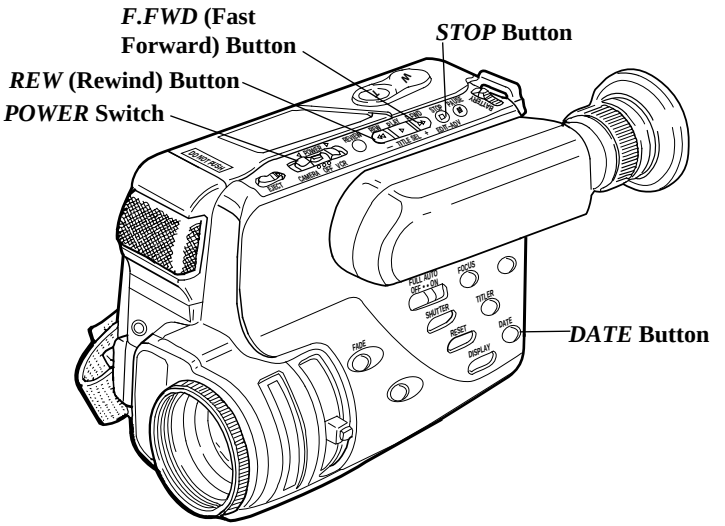
The time and date (or only the date) can be recorded on your tape. Whenever one of the displays appears in the viewfinder, it will be recorded on the tape. You can choose to record only the date, both the date and time, or neither.

1. Install the clock battery *as described.*
2. Attach a power supply to the camcorder. Press and hold the small button on the *POWER* switch while you slide it in the *CAMERA* position. Place the *ON/POWERSAVE* lever in the *ON* position.
3. If the date and time display does not automatically appear in the viewfinder, press the *DATE* button.
4. A flashing cursor lets you know which part of the display you are setting. Press the *F.FWD* or *REV* button repeatedly until the correct month appears.



5. Then press the *STOP* button. The flashing cursor will move to the next part of the display.

(continued on next page)



6. Repeat steps 4 and 5 until you have entered the correct month, day, year, hour, minute, and *AM* or *PM*.
7. After you select *AM* or *PM*, press the *STOP* button again to remove the flashing cursor from the viewfinder and start the camcorder's internal clock.

Correcting the Date or Time

To correct the date or time after the clock has been started, simultaneously press the *DATE* and *STOP* buttons for a few seconds until the flashing cursor appears in the viewfinder. Then correct the date or time using the *REW*, *F.FWD*, and *STOP* buttons.

Recording Date and Time (or Date) on Your Tape

If you see the date and time (or date) display in the viewfinder while you are recording, it will be recorded on your tape. If you do not want it recorded, press the *DATE* button until the displays are removed from the viewfinder.

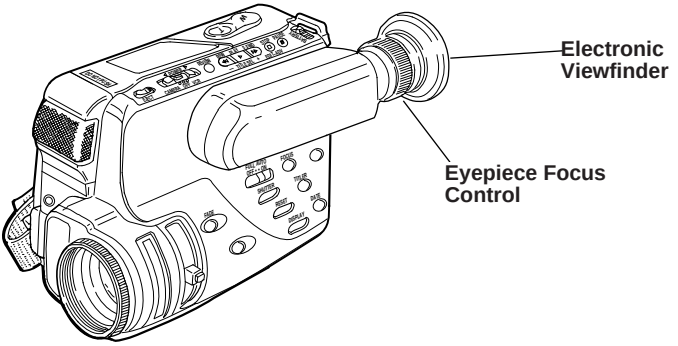
Press *DATE* Button	To Display in Viewfinder and Record on Tape
One Time	Date and Time
Two Times	Date Only
Three Times	Neither Date or Time
Four Times	Returns to Date and Time

Electronic Viewfinder

The camcorder's electronic viewfinder (EVF) is a miniature black-and-white monitor that displays the picture seen by the camcorder when recording. The viewfinder can also be used for viewing the tape during playback.

Eyepiece Focus Control

Caution: Do not force the viewfinder to rotate completely around. This will damage the viewfinder and/or the camcorder.



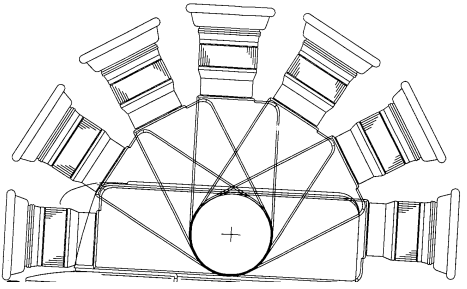
The eyepiece focus control lets you set the focus of the viewfinder for your personal vision. If you wear eyeglasses, you can probably operate the camcorder without them.

It's easiest to set the correct focus by focusing on one of the viewfinder's on-screen displays (such as the date or battery level indicator). Look through the viewfinder, and adjust the eyepiece focus control for your vision.

The eyepiece focus control does not affect the focus of the picture actually recorded by the camcorder.

Tilt Adjustment

For convenient viewing, you can rotate the viewfinder about 180°.

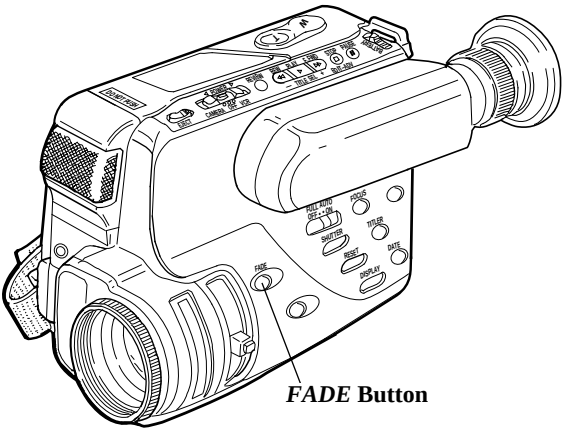


180˚ Tilt

Cautions: When carrying the camcorder with the shoulder strap, rotate the electronic viewfinder to the front. This helps prevent possible damage to the viewfinder from bumping against your body as you move.

Fading In and Out of Scenes

You can add a professional touch to your recordings when you fade in and out of scenes. Both the picture and sound will gradually appear or disappear. The speed of the fade is automatically controlled by the camcorder.



***FADE* Button**

Fading In

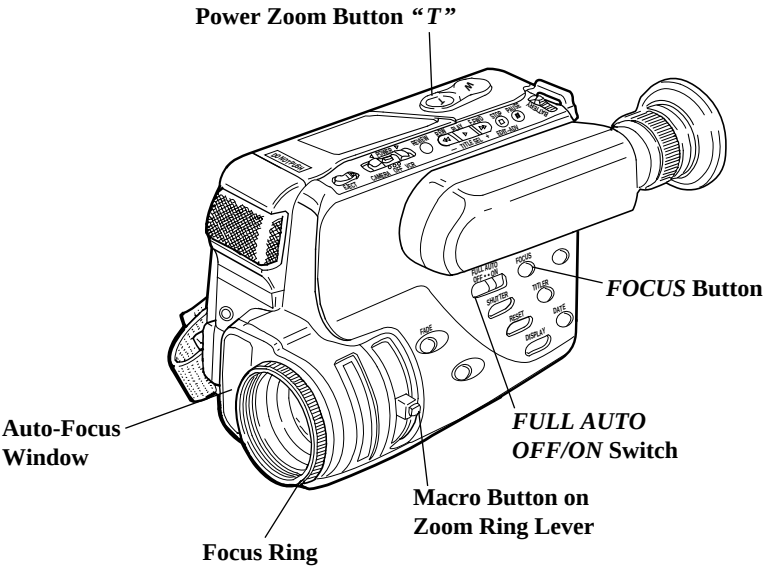
When you fade into a scene, the recording will start with a blank screen, and the picture and sound will gradually appear.

1. Place the camcorder in the record-pause mode.
2. Press and hold the *FADE* button, then press the thumb trigger to start recording.
3. Release the *FADE* button after a few seconds. The picture and sound will gradually appear in place of the blank screen.

Fading Out

When you fade out of a scene, the picture and sound will gradually disappear.

1. While the camcorder is recording, press and hold the *FADE* button. The picture and sound will gradually disappear from the screen.
2. Continue to hold the *FADE* button, and press the thumb trigger to stop recording.
3. When the camcorder has stopped recording, release the *FADE* button. The camcorder will return to normal operation.



Auto Focus

If you want the camcorder to focus for you automatically, place the *FULL AUTO OFF/ON* switch in the *ON* position.

The camcorder's auto-focus system sends out an infrared light beam and automatically focuses on the nearest object that reflects this light. Take care not to block the camcorder's auto-focus window while recording with the auto-focus system.

Cautions: Do not grasp or turn the focus ring when the *FULL AUTO OFF/ON* switch is in the *ON* position.

It is not possible to use the camcorder's auto-focus system when using optional wide-angle or telephoto lens adapters.

Manual Focus

Under certain conditions, such as those listed, you may need to focus manually. Place the *FULL AUTO OFF/ON* switch in the *OFF* position, and turn the focus ring with your fingers.

To maintain proper focus throughout the zoom range, zoom in on your subject, and adjust the focus ring to display a sharp, clear picture in the viewfinder. (You can zoom in by holding the power zoom button labeled "*T*".)

When the *FULL AUTO OFF/ON* switch is in the *OFF* position, you can press and hold the *FOCUS* button to activate auto focusing. Auto focus will remain activated until you release the *FOCUS* button. This is useful if you are shooting a relatively static scene in manual focus and need to quickly and momentarily adjust for a change in the scene.

The following conditions may require the use of manual focusing during recording.

- When using the optional wide-angle or telephoto lens adapters, turn off the auto-focus system and focus manually.
- Sloping or inclined surfaces may not be focused because the reflected light will not be returned to the auto-focus window.
- Recording through a window may cause the auto-focus system to focus on the window instead of the subject.
- Dark objects, such as a subject's clothing, may absorb the infrared light and require you to focus manually.
- The auto-focus system may not focus properly on subjects more than approximately 35 feet away from the camcorder.

Macro Focus

The macro-focus feature lets you focus on objects as close as 1/4 inch from your camcorder.

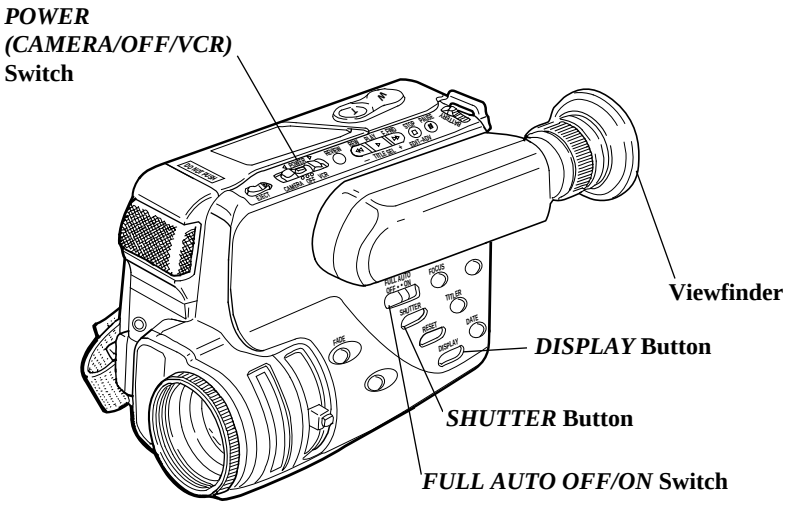
1. Place the *FULL AUTO OFF/ON* switch to the *OFF* position.
2. Press and hold in the macro button located on the zoom ring lever while rotating the zoom ring to the *MACRO* position.
3. Release the macro button.
4. Slowly rotate the zoom ring with your fingers until you get a sharp picture.

Notes: To release macro focus, press and hold the power zoom button "*T*".

Zooming is not possible when using macro focus. To change the size of the subject, move the camcorder's lens closer or farther away from it.

The focus ring has no effect in macro focus.

Using Variable Shutter Speeds



Because your camcorder has a variable shutter, you can choose *AE* (automatic exposure) or one of six shutter speeds (1/60, 1/120, 1/250, 1/1000, 1/2000, and 1/10000 second). The *POWER* switch must be in the *CAMERA* position.

When the *AE* (automatic) shutter speed is selected, the camcorder automatically selects a shutter speed of *AE:60*, *AE:100 AE:120*, or *AE:250* second according to the lighting condition.

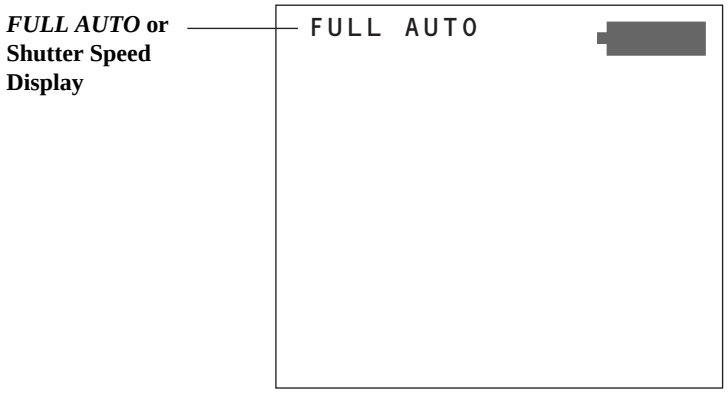
The higher shutter speeds are recommended when you are taping fast-moving action outdoors that you plan to play back on a (3-5 head) VCR or camcorder using special effects (such as stop-action pause and slow motion). The higher shutter speeds produce better performance during special effect playback.

A tape recorded at the higher shutter speeds may not show movement and change of scene as smoothly as recordings at the normal 1/60 second speed.

For indoor high-speed shutter recording, you may find that additional halogen or tungsten lighting is required.

When recording at higher shutter speeds, use of fluorescent, mercury vapor, or sodium lighting may cause a “flickering” effect.

(continued on next page)



Displays in Viewfinder

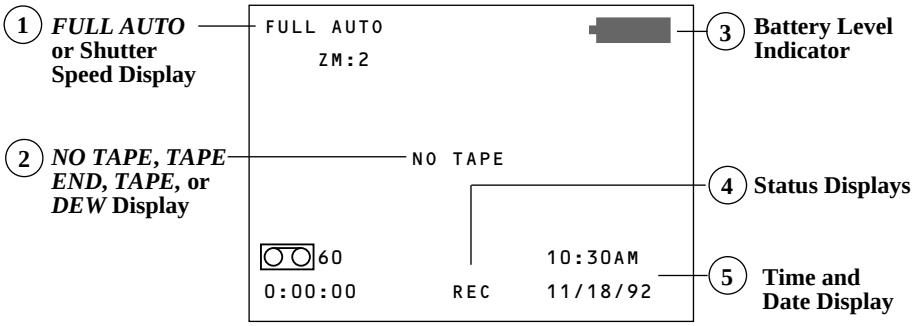
FULL AUTO OFF/ON Switch *ON*

- When the *FULL AUTO OFF/ON* switch is in the *ON* position, the camcorder automatically selects the shutter speed of 1/60 second. *FULL AUTO* appears in the viewfinder when you press the *DISPLAY* button.
- When the *FULL AUTO OFF/ON* switch is in the *ON* position, you can still select shutter speeds by repeatedly pressing the *SHUTTER* button. The shutter speed selected (*S:120*, *S:250*, *S:1000*, *S:2000*, *S:10000* or *AE*) will appear in the viewfinder for a few seconds and then *FULL AUTO* will return.

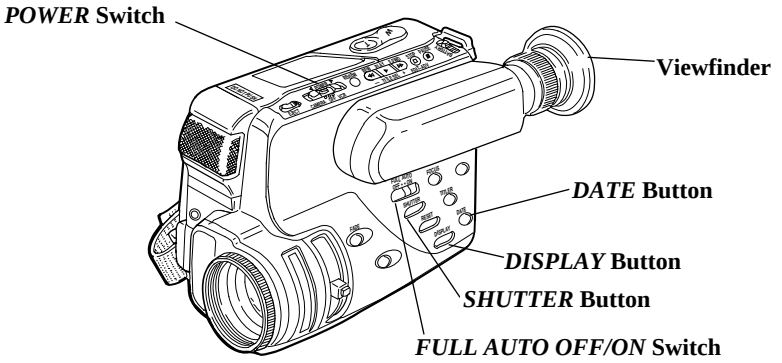
FULL AUTO OFF/ON Switch *OFF*

- When the *FULL AUTO OFF/ON* switch is in the *OFF* position, you can select *AE* (automatic exposure) or one of six shutter speeds by repeatedly pressing the *SHUTTER* button. Each time you press the *SHUTTER* button, the shutter speed will increase. When you press the *DISPLAY* button, the shutter speed selected will appear in the viewfinder (*S:120*, *S:250*, *S:1000*, *S:2000*, *S:10000*, or *AE*). No shutter speed display will appear when 1/60 second is selected.
- Higher shutter speeds require more light.

Displays in Viewfinder



Displays in Viewfinder



The camcorder has several displays in the viewfinder that tell what the camcorder is doing, and aid in the ease of operation.

1 *FULL AUTO* or Shutter Speed Display

When you press the *DISPLAY* button to display the battery level indicator, time counter, or time-remaining display, these displays appear in the viewfinder. They are not recorded on the tape when they appear.

Note: The AE or shutter speed display appears automatically for a few seconds when you press the *SHUTTER* button.

- *FULL AUTO* appears when the *FULL AUTO OFF/ON* switch is placed in the *ON* position.

Note: The AE or shutter speed display appears automatically for a few seconds when a new shutter speed is selected.

(continued on next page)

- When the *FULL AUTO OFF/ON* switch is in the *OFF* position, *AE* (automatic exposure) or the shutter speed (*S:120*, *S:250*, *S:1000*, *S:2000*, or *S:10000*) selected with the *SHUTTER* button appears. No shutter speed display appears when the normal (1/60 second) speed is selected. *Details are on pages 38-39.*

(2) *NO TAPE, TAPE,* and *TAPE END* Displays

- *NO TAPE* flashes in the viewfinder when you attempt to record and there is no cassette in the camcorder.
- *TAPE* flashes in the viewfinder when you attempt to record and the record-protect (safety) tab has been closed.
- *TAPE END* flashes in the viewfinder when there is approximately three minutes of recording time left on the cassette.
- *TAPE END* appears briefly in the viewfinder during recording when the end of the cassette is reached.

(3) Battery Level Indicator

Press the *DISPLAY* button to display the battery level indicator in the viewfinder. This indicator will not be recorded on the tape when it appears. *Details are on pages 22-23.*

(4) Status Displays

One of the following displays will appear in the viewfinder to let you know what the camcorder is doing. These displays are not recorded on the tape when they appear in the viewfinder.

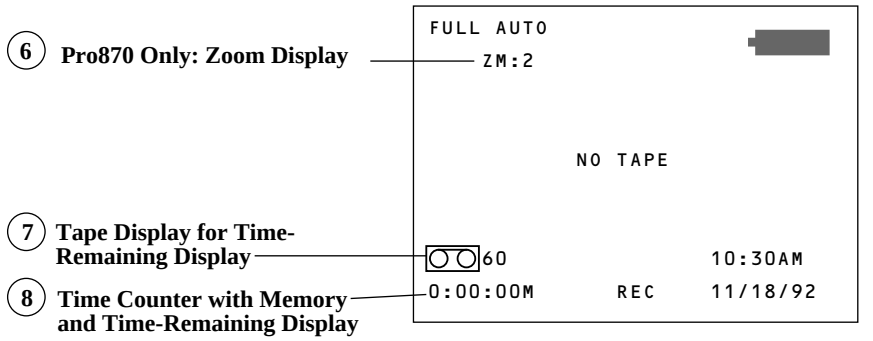
- *REC* appears when the camcorder is recording.
- *FASTFWD* appears when the tape is fast forwarding, and *REWIND* appears when the tape is rewinding.
- *PAUSE* appears when you press the thumb trigger to stop recording.
- *AV DUB* appears when you are audio/video dubbing.

(5) Time and Date Display

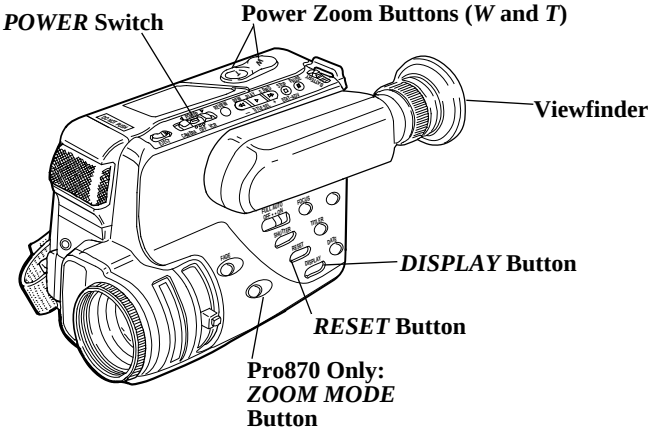
Press the *DATE* button repeatedly to display the time and date (or date) display when the camcorder is in the record or record-pause mode *(POWER* switch in *CAMERA* position).

- This display will be recorded on the tape whenever it appears in the viewfinder.
- Press the *DATE* button to remove this display from the viewfinder.
- *Details are on pages 32-33.*

(continued on next page)



Displays in Viewfinder



6 Pro870 Only: Zoom Displays

Repeatedly press the *ZOOM MODE* button to select one of the digital zooming modes. The mode selected will appear in the viewfinder. This display will not be recorded on the tape when it appears in the viewfinder. Press one of the power zoom buttons (*W* or *T*) to control the size of the digital zoom ratio.

- Normal operation allows you to zoom from wide angle to 16 times zoom.
- Press the *ZOOM MODE* button to display *ZM: 2.* This allows you to zoom from wide angle to 64 times zoom.
- Repeatedly press the *ZOOM MODE* button to display *ZM: 2 (16X9).* Use this to make a recording that is compatible for playback on a 16 x 9 TV that has expand capabilities.
- *Details are on pages 46-47*

(continued on next page)

Displays in Viewfinder (continued)

(7) Tape Display for Time-Remaining Display

Press the *DISPLAY* button to display the time-remaining display. Then press the *RESET* button to display the size tape you are using in the camcorder. This display will not be recorded on the tape when it appears in the viewfinder.

- Display *15* in the viewfinder when you are using a 15-minute tape.
- Display *20* in the viewfinder when you are using a 20-minute tape.
- Display *30* in the viewfinder when you are using a 30-minute tape.
- Display *45* in the viewfinder when you are using a 45-minute tape.
- Display *60* in the viewfinder when you are using a 60-minute tape.
- Display *90* in the viewfinder when you are using a 90-minute tape.
- Display *120* in the viewfinder when you are using a 120-minute tape.
- Display *135* in the viewfinder when you are using a 135-minute tape.
- Display *140* in the viewfinder when you are using a 140-minute tape.
- *Details are on page 45.*

Note: If you use a tape other than the above sizes, the time-remaining feature will not operate properly.

(8) Time Counter With Memory Stop and Time-Remaining Display

- Press the *DISPLAY* button once to display the time counter with the battery level indicator in the viewfinder.
- Press the *DISPLAY* button again to turn on the time counter's memory stop feature. An *M* appears behind the time counter display.
- Press the *DISPLAY* button again to change the time counter to the time-remaining display. "-:--" appears in the viewfinder. When you first start playing or recording a tape, it will take the camcorder a minute or two to calculate the time remaining on the tape. After time remaining has been calculated and displayed once, it will be automatically updated and readily available as long as the tape remains in the camcorder.
- Press the *DISPLAY* button again to remove these displays from the viewfinder.
- These displays will not be recorded on the tape when they appear.
- *Details are on pages 44-45.*

Time Counter With Memory Stop and Time-Remaining

Time Counter With Memory Stop

Time Counter

The time counter display shows the actual time elapsed when recording a program or playing back a segment of a pre-recorded tape.

The time counter also helps you quickly locate the end of programs. Note the time counter reading when you are finished recording or playing back a tape. For example, you recorded a 10-minute program. Later, if you want to locate the end of your recording, you can insert the tape, display the time counter, and fast forward the tape until the time counter reads "0:10:00".

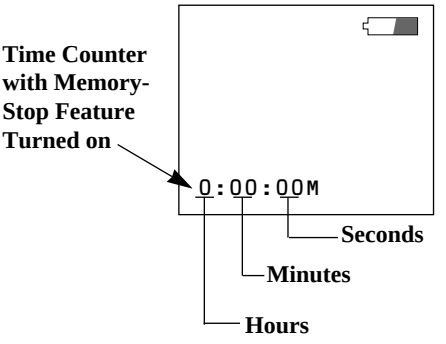
Before you start to record or play back a tape, press the *DISPLAY* button to display the time counter with the battery level indicator in the viewfinder. Then press the *RESET* button to set the counter to "0:00:00".

Memory-Stop Feature

The memory-stop feature helps you locate a certain point on the tape. This is useful if you want to review a section immediately after recording or return to the same place on the tape several times during playback. When memory stop is turned on, the tape will stop automatically during rewind or fast forward when the time counter reaches "0:00:00*M*".

1. Press the *DISPLAY* button twice to turn on the time counter's memory-stop feature. An "*M*" appears after the time counter in the viewfinder.
2. Locate the place on the tape you want to return to, and press the *RESET* button to set the time counter to "0:00:00*M*".
3. Continue to record or play the tape. When you want to return to the place you marked, press the thumb trigger to stop recording, or the *STOP* button to stop playing back the tape.
4. Make sure the *CAMERA/OFF/VCR* switch is in the *VCR* position, and then press the *REW* (rewind) button. The tape will rewind to the time counter reading of "0:00:00*M*".

Display in Viewfinder



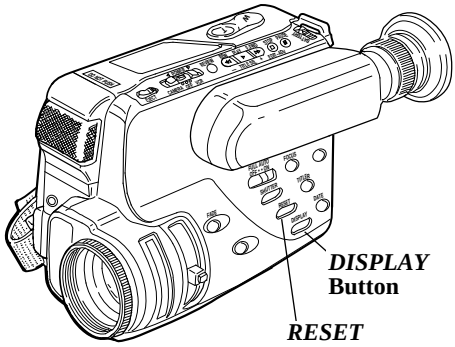
Notes: The corresponding buttons on the remote control can be used to operate the camcorder.

The time counter is automatically reset to "0:00:00" each time a cassette is inserted.

Whenever the time counter is displayed, you can reset it to "0:00:00" by pressing the *RESET* button.

If you rewind a tape farther back than a counter reading of "0:00:00", a minus will appear in front of the time counter display.

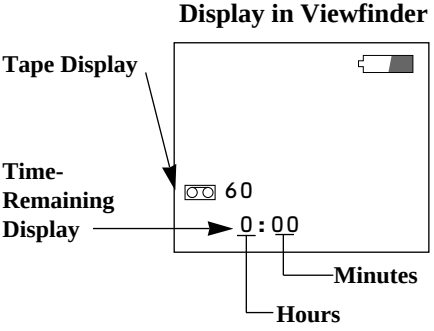
Whenever memory stop is turned on, the camcorder will stop rewinding or fast forwarding when the counter reaches "0:00:00*M*". To continue rewinding or fast forwarding, press *REW* or *F.FWD* again.



Time-Remaining Display

The time-remaining display shows the amount of recording or playback time left on a tape while it is inside the camcorder. The camcorder will calculate and display the time remaining for 15, 20, 30, 45, 60, 90, 120, 135, or 140-minute tapes.

1. Press the *DISPLAY* button repeatedly until the time-remaining display appears with the battery level indicator in the viewfinder.



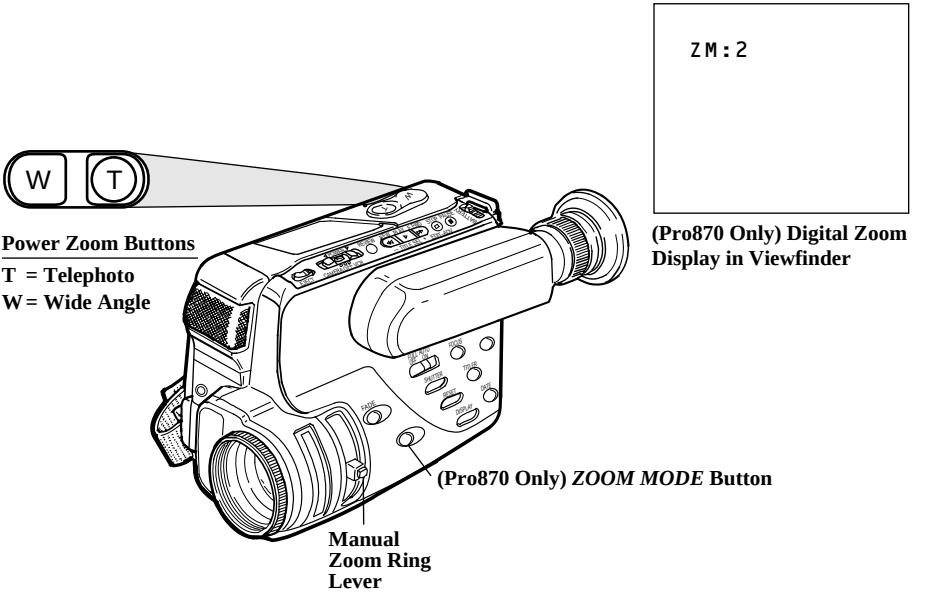
2. If the correct tape display does not appear for your size of tape, press the *RESET* button repeatedly until the correct tape size is displayed. For example, if you are using a 60-minute cassette, the tape display should be 60.

The display will remain blank until the camcorder has finished its calculations. When you first start playing or recording a tape, it will take the camcorder a minute or two to calculate the time remaining on the tape. After time remaining has been calculated and displayed once, it will be automatically updated and readily available as long as the tape remains in the camcorder.

Notes: The camcorder can not calculate time-remaining correctly on tapes other than those listed above.

The corresponding buttons on the remote control can be used to operate the camcorder.

Zooming



Using Power Zoom Buttons

The motorized zoom lens allows you to zoom in and out for close-ups or wide-angle shots just by pressing one of the power zoom buttons.

The zoom buttons are easily controlled by your index and middle fingers when you hold the camcorder through the hand strap.

- Press the button labeled "T" to move the lens in the telephoto (close-up) direction.
- Press the button labeled "W" to move the lens in the wide-angle direction.

Note: The corresponding buttons on the remote control can be used to control the camcorder.

Using the Manual Zoom Ring

When you want to zoom in or out of a scene without using the power zoom buttons, you can turn the zoom ring manually by holding the zoom ring lever with your fingers. This lets you control the speed of the zoom. Manual zoom allows you to zoom from wide angle to up to 8 times zoom.

(Pro870 Only) Digital Zooming

The Pro870 has an electronic power zoom feature which allows you to zoom in on a subject with magnification of up to 64 times.

1. Repeatedly press the *ZOOM MODE* button to select the digital zoom mode.
   - Normal zoom mode allows you to enlarge the image from 1-16 times without changing the proportion of the image. No display will appear in the viewfinder when normal zoom is selected.
   - Select *ZM:2* to activate the extended zoom mode which allows you to zoom up to 64 times.
   - *ZM:2 16X9* is used to change the recording format. *ZM:2 16X9 is explained below.*
2. Press one of the power zoom buttons (*W* or *T*) to control the digital zoom ratio.

Notes: When you zoom in the close-up direction above eight times, the zoom ratio display (*X8–X64*) appears with the zoom mode display.

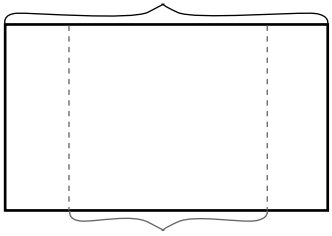
Digital zoom above 16 times causes some deterioration in picture resolution.

Digital zoom above 16 times is primarily for special effects.

(Pro870 Only) 16 x 9 Mode

A new 16 x 9 TV format will be introduced in late 1992 that provides a 30% wider picture.

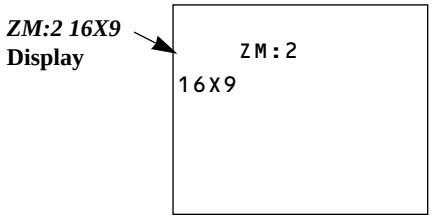
New 16 x 9 TV Screen



Standard Size TV Screen

The Pro870 has a 16 x 9 recording mode that lets you make recordings that are compatible with this new format. When the 16 x 9 mode is activated, the camcorder will record the picture in a compressed format that is then expanded when played back on a 16 x 9 TV. Do not use this recording mode unless you have a 16 x 9 TV. When played back on a standard size TV, the 16 x 9 recorded image will appear thinner than normal.

- Repeatedly press the *ZOOM MODE* button to select *ZM:2 16X9*. The following display will appear in the viewfinder.

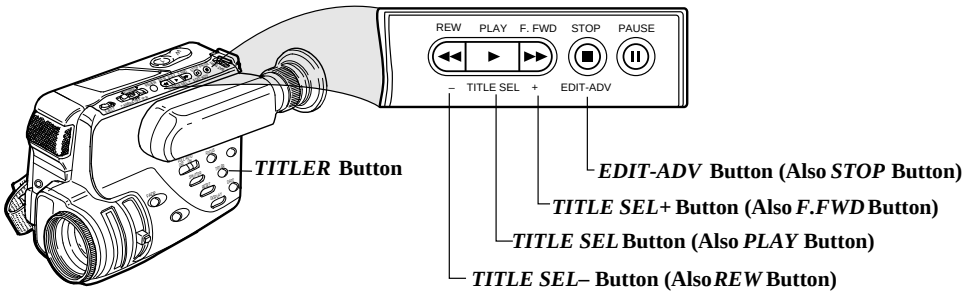


***ZM:2 16X9* Display**

Display in Viewfinder

- To turn off the *ZM:2 16X9* mode, repeatedly press the *ZOOM MODE* button to return to the normal mode. No display will appear in the viewfinder.

Titler



The camcorder's built-in titler can store two different title pages in memory. Each title page can be displayed and recorded at any time.

The built-in character register contains over 40 different characters for creating titles with up to 32 characters on two lines.

Creating a Title

1. Attach a power source to the camcorder, and slide the *POWER* switch to the *CAMERA* position. Place the *ON/POWERSAVE* lever in the *ON* position.
2. Press the *TITLER* button to display the title page graphics in the electronic viewfinder.

   Note: Press the *TITLE SEL* button to display the other title page. Each time you press this button, it will switch between the two title pages.
3. Press the *EDIT-ADV* button to move the flashing cursor to the place you want to begin your title.
4. Select the first character for your title by pressing the *TITLE SEL* + or *TITLE SEL* − button until the character you want appears. See the "Chart of Characters" *on the next page* for the characters available in the titler's register.
5. After you have selected the first character, press the *EDIT-ADV* button to move the flashing cursor to the position where you want your next character to appear.
6. Repeat steps 4 and 5 until you have completed the title.
7. Press the *TITLE SEL* button if you wish to create another title on the other title page.
8. Press the *TITLER* button to store the title and remove the title display from the viewfinder when you are finished.

Important Note: Remember to remove the titler graphics from the viewfinder for normal recording.

Chart of Characters in Titler's Register

A B C D E F
G H I J K L
M N O P Q R
S T U V W X
Y Z

0 1 2 3 4 5 6 7 8
9 ? ' . / , - ; : < > !
(Blank)

Correcting Errors During Programming

1. Press the *EDIT-ADV* button until the flashing cursor is placed over the character you wish to correct.
2. Press the *TITLE SEL* + or *TITLE SEL* − button until the correct character appears.

   Note: If you want to delete a character, press the *TITLE SEL*+ or *TITLE SEL* – button until the blank space appears.

Recording Titles on a Tape in the Camcorder

1. Attach a power source to the camcorder, and slide the *POWER* switch to the *CAMERA* position. Place the *ON/POWERSAVE* lever in the *ON* position.
2. Locate the place on the tape where you want to record the title.

   Note If you record a title on a pre-recorded tape, the audio and video will be erased where the title is inserted. There will also be a three-to-four second pause of blank tape before the existing audio and video return.
3. Place the camcorder in the record-pause mode.
4. Press the *TITLER* button to display the titler graphics in the electronic viewfinder.

   Note: If you wish to record the title on the other page, press the *TITLE SEL* button to display it in the viewfinder.
5. Press the thumb trigger to start recording the title.
6. Press the *TITLER* button to remove the titler graphics from the electronic viewfinder. The camcorder will now record as normal. (If you do not want to continue recording, press the thumb trigger to stop recording.)

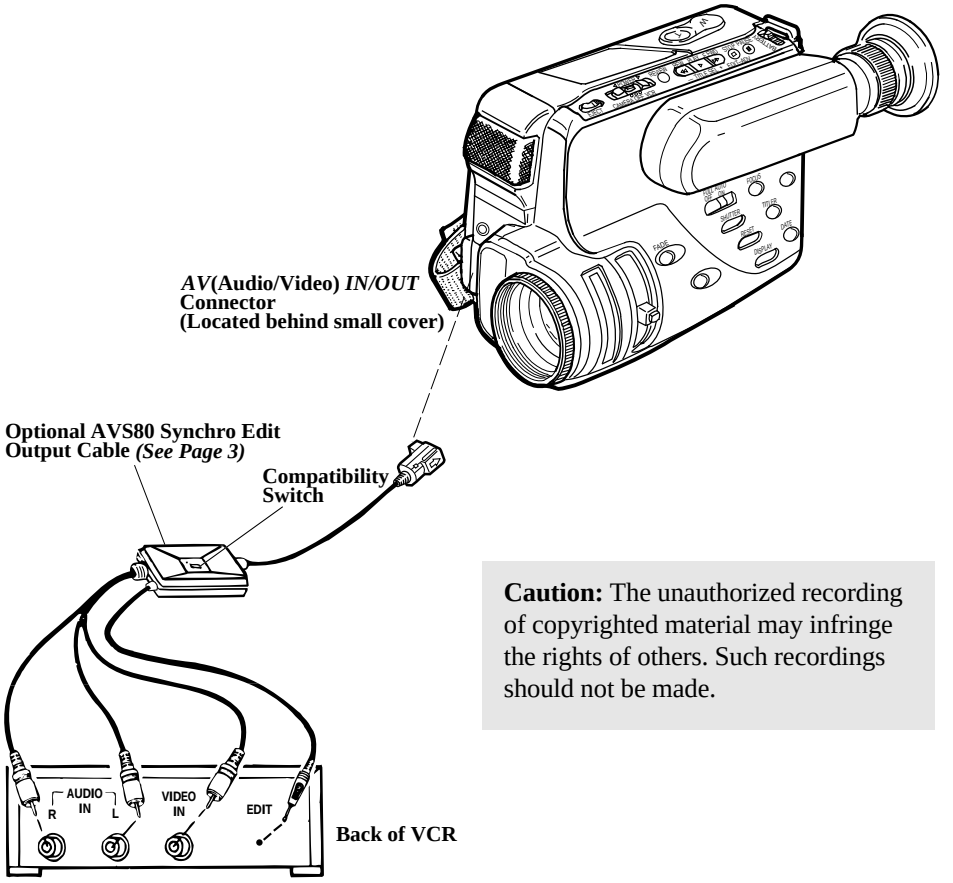
Note: The corresponding buttons on the remote control can also be used to operate the camcorder.

Synchro Edit

Synchro edit allows your camcorder to control a VCR (one that has a compatible *PAUSE*, *EDIT*, *EDIT IN/OUT,* or *SYNC* jack) while tapes are being copied from the camcorder to the VCR.

This is convenient when you want to copy only selected segments from a previously recorded tape. An optional AVS80 synchro edit cable *shown on page 3* is required.

Note: *Not* all RCA VCR's have compatible synchro edit jacks.



Note: If your VCR has a single (mono) *AUDIO IN* jack, connect either the left or right audio plug.

Caution: The unauthorized recording of copyrighted material may infringe the rights of others. Such recordings should not be made.

To Synchro Edit

1. Connect your camcorder to a compatible VCR as shown.
2. Prepare the camcorder to play back the tape you want to copy.
   - Slide the *POWER* switch to the *VCR* position.
   - Press the *EJECT* button, and insert the tape you want to copy.
   - Press the *PLAY* button.
   - Press the *PAUSE* button to place the camcorder in the play-pause mode.
3. Prepare the VCR to record.
   - Press *POWER* to turn on the VCR.
   - Insert a blank tape into VCR.
   - Press *RECORD* to put the VCR in the record-pause mode.

   Note: If the VCR begins to record instead of pausing, you will need to change the position of the compatibility switch on the AVS80 cable. Stop the VCR, change the switch, and then press *RECORD* on the VCR again.
4. Press the *REVIEW* button on the camcorder to start the camcorder playing and also start the VCR recording.

   Note: Pressing the *REVIEW* button puts the camcorder in the review mode for several seconds and then into the playback mode.
5. Pressing *REW* (rewind), *F.FWD* (fast forward), *STOP*, or *PAUSE* on the camcorder automatically puts the VCR into the record-pause mode.

   This allows you to search (forward or backward), fast-forward or rewind the tape in the camcorder without disturbing the tape in the VCR.
   - To search forward (or backward), press and hold *F.FWD* (or *REW*). When you release the button, the camcorder will resume normal playback. To begin copying again, press the *PAUSE* button, and then press the *REVIEW* button.
   - To fast-forward or rewind the tape, press *STOP* then *F.FWD* (or *REW*). To begin copying again, press *STOP*, then *PLAY*, then *PAUSE* to pause the camcorder, and then press *REVIEW* to begin copying.
6. If you want to stop copying the tape at a certain point, turn on the camcorder's memory-stop feature, and set the camcorder's time counter to "0:00:00*M*" at the point on the tape where you want to stop copying. When the camcorder reaches "0:00:00*M*" on the tape, it will automatically stop the VCR from recording, and put the VCR in the record-pause mode.

Note: The corresponding buttons on the remote control can also be used to operate the camcorder.

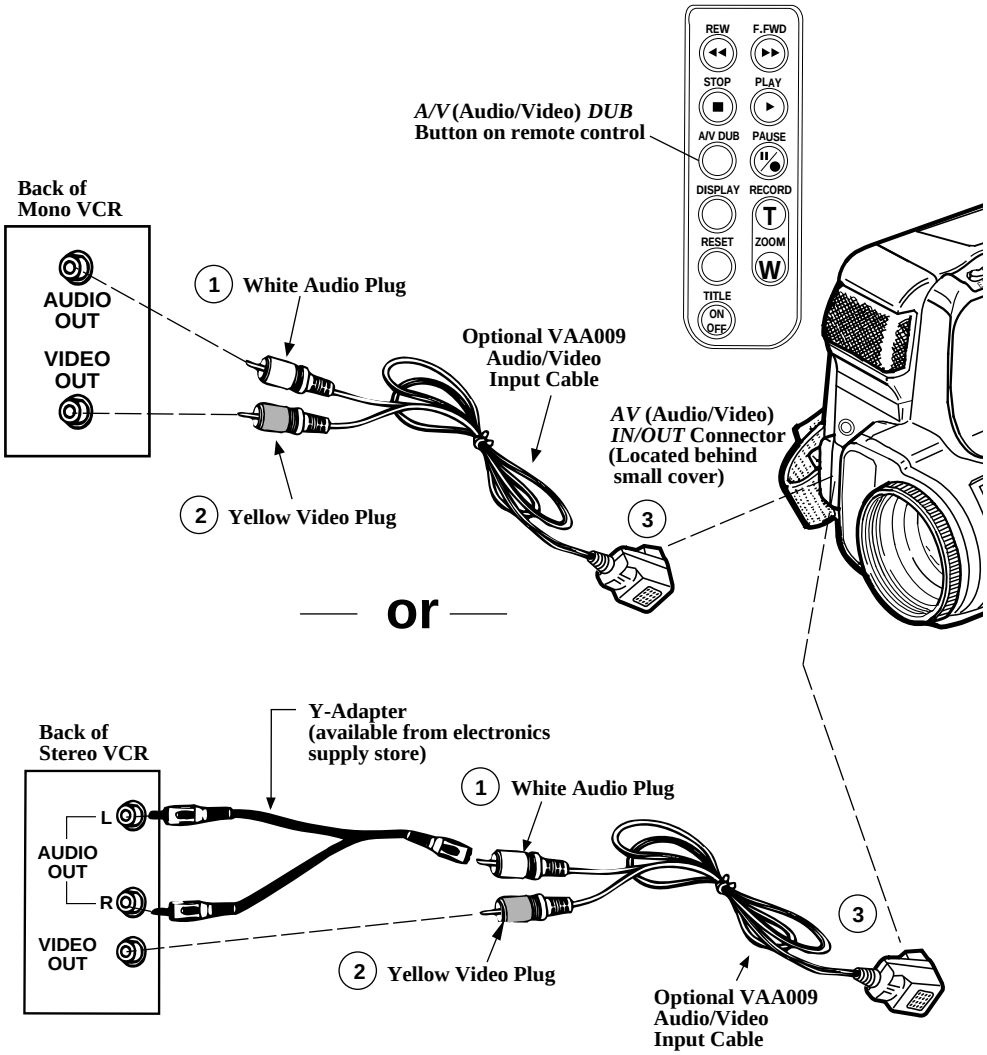
Audio/Video Dubbing

The *A/V* (audio/video) *DUB* button on the remote control lets you record new audio and video from another VCR or camcorder to a previously recorded tape in the camcorder. You will need an optional VAA009 audio/video input cable *shown on page 3.*

Notes: The source for audio and video when dubbing is the signal coming through the audio and video plugs of the audio/video input cable.

If you connect only the video plug of the audio/video input cable to the VCR, you will have no sound on the dubbed portion.

If you connect only the audio plugs of the audio/video input cable to the VCR, the camcorder will not dub.



Audio/Video Dubbing (continued)

Installation

1 Attach the audio/video input cable's white plug to the *AUDIO OUT* jack of the VCR.

Note: If your VCR has stereo left and right *AUDIO OUT* jacks, attach the plug to the one labeled *MONO*. If one of the jacks is not labeled *MONO*, you may need a Y-adapter to record both channels.

2 Attach the audio/video input cable's yellow plug to the *VIDEO OUT* jack on the VCR.

3 Attach the plug on the other end of the audio/video input cable to the *AV IN/OUT* connector located behind the small cover on the front of the camcorder. (Match the tabs on the plug with the notches on the camcorder connector. Do not force the plug.)

How to Audio/Video Dub on the Camcorder

1. Slide the camcorder's *POWER* switch to the *VCR* position.
2. Insert the tape you want to dub on, press the *PLAY* button, and locate a place on the tape a few seconds before where you want the dubbing to begin.
3. Press the *PAUSE* button exactly where you want to begin dubbing to place the camcorder in the play-pause mode.
4. Press and hold the *A/V DUB* button, and then press the *PLAY* button on the remote control to place the camcorder in the AV dub-pause mode.
5. Place the tape you want to dub from in the VCR, locate the part you want to dub, and place the VCR in the play-pause mode.
6. Start the VCR playing, and then press the *PAUSE* button on the camcorder to start dubbing.
7. Press the *STOP* button on the camcorder where you want the dubbing to stop.
8. If you want to stop dubbing at a certain point on the tape, turn on the camcorder's memory-stop feature. Set the time counter to "0:00:00M" at the point where you want the dubbing to stop. The camcorder will automatically stop dubbing when it reaches "0:00:00M".

Notes: You can record new audio and video from the camcorder's built-in microphone and camera. Remove the audio/video input cable from the camcorder. Follow steps 1 through 4 above, and then press the *PAUSE* button to start dubbing. To stop dubbing, press the *STOP* button.

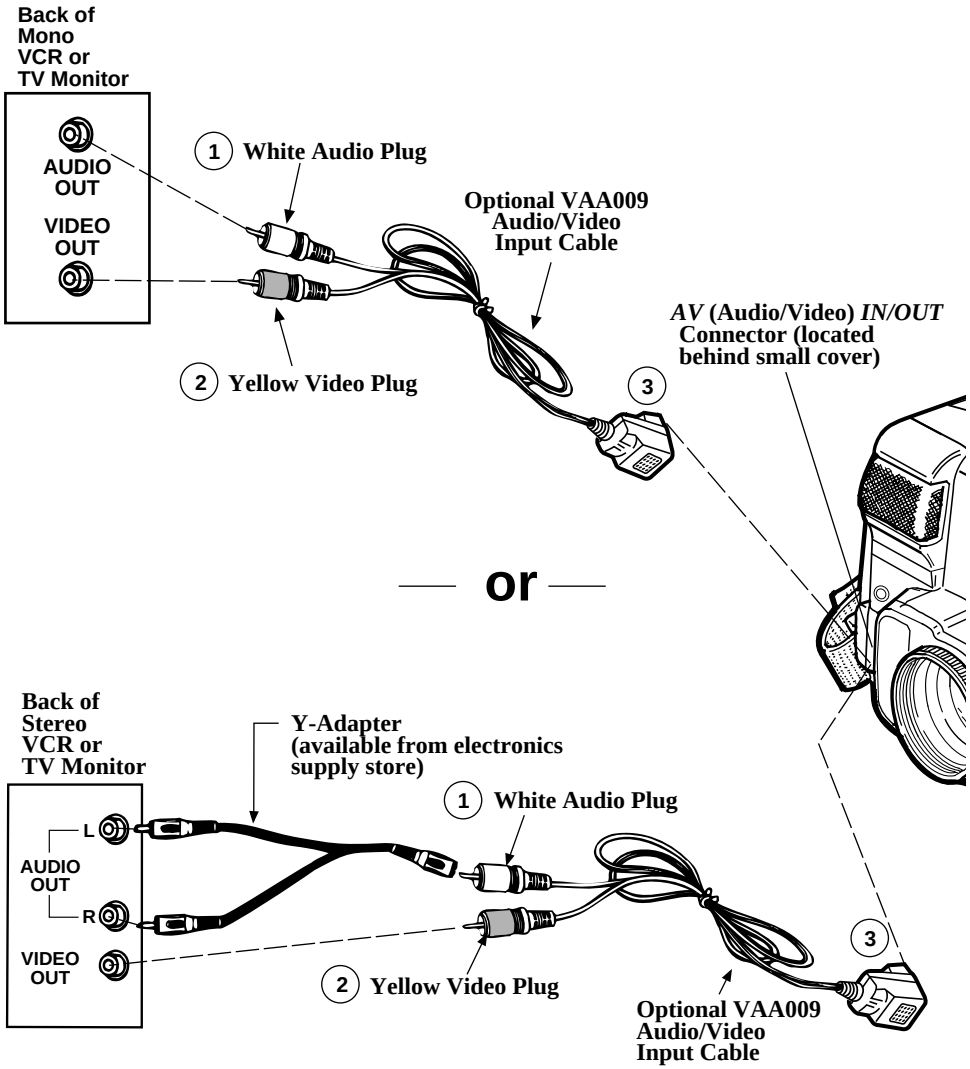
The corresponding buttons on the remote control can also be used to operate the camcorder.

The camcorder will automatically enter the stop mode to prevent excessive tape wear if it remains in the dub-pause mode for more than five minutes.

Recording on Camcorder from VCR or TV Monitor

To connect your camcorder to a TV (or VCR) with *AUDIO* and *VIDEO OUT* jacks, you will need an optional VAA009 audio/video input cable *shown on page 3*.

If your TV is already connected to a VCR, you can attach the camcorder to the VCR and watch what the camcorder is recording on the TV.



(continued on next page)

Recording on Camcorder from VCR or TV Monitor (continued)

Installation

1. Attach the audio/video input cable's white plug to the *AUDIO OUT* jack on the TV or VCR.

   Note: If your TV or VCR has stereo left and right *AUDIO OUT* jacks, attach the plug to the one labeled *MONO*. If one of the jacks is not labeled *MONO*, you may need a Y-adapter to record both channels.

2. Attach the audio/video input cable's yellow plug to the *VIDEO OUT* jack on the TV or VCR.

3. Attach the plug on the other end of the audio/video input cable to the *AV IN/OUT* connector behind the small cover on the front of the camcorder. (Match the tabs on the plug with the notches on the camcorder connector. Do not force the plug.)

How to Record on the Camcorder from a TV (or VCR)

1. A. Camcorder connected directly to TV monitor: Turn on the TV, and tune it to the channel you want to record.

   B. Camcorder connected to a VCR that is already connected to a TV: Turn on VCR and select channel you want to record, or place the cassette you want to copy in the VCR. If you are copying a tape, press the *PLAY* button on the VCR.

   Note: If you want to see what is being recorded, turn on the TV, and tune it to the channel you normally use to see the signal from the VCR.

2. Slide the camcorder's *POWER* switch to the *CAMERA* position, place the *ON/POWERSAVE* lever in the *ON* position, and insert a blank cassette. Press the camcorder's thumb trigger to start recording.
3. Press the thumb trigger when you are finished.

Caution: The unauthorized recording of television programs and other materials may infringe the rights of others.

Camcorder Recording Tips

Practice recording under a variety of lighting conditions. This will help you respond quickly whenever you see a scene you want to record.

When using manual focus, it is easier to make professional looking videos if you check the focus before you start recording. Use your camcorder's zoom to help you focus manually. Before you start recording, zoom in on your subject and adjust the focus ring until you see a clear image in the viewfinder. Then zoom back to where you want to record. If the subject-to-camcorder distance does not change, the subject will remain in sharp focus over the entire zoom range.

Keep your auto-focus window clean and unobstructed to help assure proper auto-focus operation.

Do not move the camcorder rapidly from side-to-side while recording. A steady, gradual "pan" avoids blurring and "jitter".

Use the viewfinder to make sure the camcorder is level while recording or your scenes will appear "tilted".

Try to make sure indoor scenes are well-lit. This improves picture quality and color reproduction.

Do not bump or tap the camcorder's microphone while recording because this sound will be recorded.

Be aware of video and audio backgrounds. Background details barely noticed while you are taping may show up as visual "clutter" on your recording. Background noises (especially TV sets, radios, household appliances, traffic sounds, etc.) can detract from the sound you want to record.

Avoid long "still" shots of landmarks and scenic attractions. Recordings are more interesting if they include people and details. "Local color" will give travel videos lasting appeal. Consider recording a familiar or landmark scene from an unfamiliar vantage point for added interest. Remember to check the lighting before starting to record.

Try to avoid taping backlit subjects indoors. Bright light behind your subject may cause the subject to appear too dark and low in detail. Pressing the *BACK LIGHT* button may help overcome this problem.

Include close-up shots of individuals when taping family outings or group functions.

Fading in and out of scenes will make your videos appear more professional.

Do not move your camcorder's zoom lever quickly when manually controlling the zoom lens. A slow, constant speed gives your zooms a more professional look.

When recording fast-moving action in outdoor light that you plan to view in stop-action or slow motion on a 3-5 head VCR, try increasing the shutter speed.

Make a video recording of your home and contents to store in a safe place in case of fire or theft.

Traveling Tips

Write down your camcorder's serial number and keep it separate from the camcorder when traveling. If your camcorder is lost or stolen, you will be able to identify it.

Make sure you have any plug adapters that you may need before taking your camcorder to other countries. Consult your RCA dealer for advice.

Use extra care to avoid damage to your camcorder and accessories when operating them at a beach or pool. Spray, sand, and dust should be avoided. If your lens has been exposed to the elements, clean it only with proper lens cleaning supplies.

Carry your camcorder in a carrying case when traveling. *See page 1* for cases especially designed for this camcorder. An ordinary suitcase or carry bag does not offer the protection your camcorder needs. Treat your camcorder as carry-on luggage to protect it from rough handling.

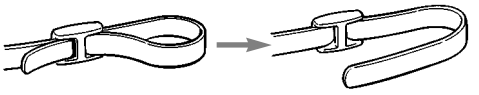
Attaching the Shoulder Strap

The shoulder strap packed with your camcorder is designed to let you carry the camcorder from your shoulder and–when you are ready to shoot–bring the camcorder to shooting position in one quick movement.

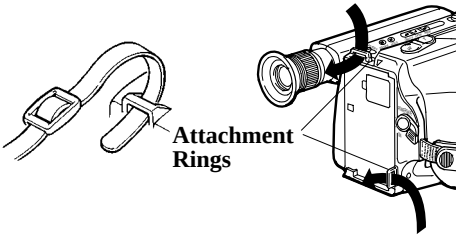
Caution: When carrying the camcorder with the shoulder strap, you may find it convenient to rotate the electronic viewfinder to the front. This helps prevent possible damage to the viewfinder from bumping against your body as you move.

To Attach the Shoulder Strap

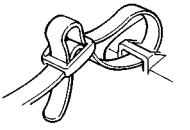
1. Unfasten one end of the shoulder strap from the buckle. Make sure you leave the buckle on the strap.



2. Thread one end of the shoulder strap through one of the shoulder strap attachment rings as shown below.



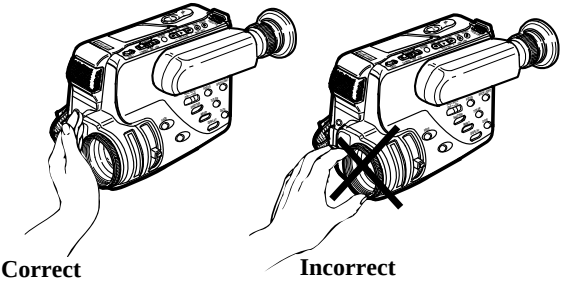
3. Thread the strap back into the buckle. Pull on the strap and make sure it is securely fastened before using the shoulder strap to support the camcorder.



4. Repeat steps 1-3 for the other end of the shoulder strap.

Removing the Lens Hood

The lens hood can be removed so you can attach optional accessories. To remove the lens hood, put your hand flat against the lens hood and turn it counterclockwise. Do not grasp the end of the lens hood.



Care and Maintenance

Proper Care and Storage

Keep dust and grit from entering the camcorder's cassette door. Dust and grit are abrasive and will cause excessive wear both to the camcorder's recording/playback heads and cassettes.

We recommend RCA video cassettes be used with this camcorder. These cassettes have been manufactured to our critical specifications. Use of cassettes not meeting these specifications may reduce the camcorder's performance or contaminate the heads resulting in a snowy picture or no picture during playback.

Always replace the lens cap on the lens when the camcorder is not in use.

Do not touch the lens with your fingers. The oil from your skin can damage the lens. Always use lens-cleaning tissue and commercially prepared cleaning solution designed for use on camera lens. Improper cleaning may scratch the lens.

Before handling your camcorder, make sure your hands and face are free from any chemical products such as suntan lotion, as it may damage the finish.

The camcorder can be damaged by improper storage or handling. Do not subject the camcorder to swinging, shaking, or dropping.

Do not store the camcorder in temperatures below -22°F (-30°C) or above 149°F (65°C).

When the camcorder is not in use, always remove the cassette and AC adapter/charger or battery.

Retain the original carton for future storage or shipping purposes.

Things to Avoid

Do not attempt to disassemble your camcorder. There are no user-serviceable parts inside.

Avoid operating your camcorder immediately after moving it from a cold location to a warm location. Give the camcorder 1-1/2 to 2 hours to reach a stable temperature before inserting a cassette. When the camcorder is moved from cold to warm, moisture may cause the tape to stick to the headwheel and damage the headwheel or tape.

Do not aim your camcorder at the sun or other bright objects.

Do not leave your camcorder in direct sunlight. Doing so could permanently damage the camcorder's internal parts.

Do not operate the camcorder in extremely humid environments.

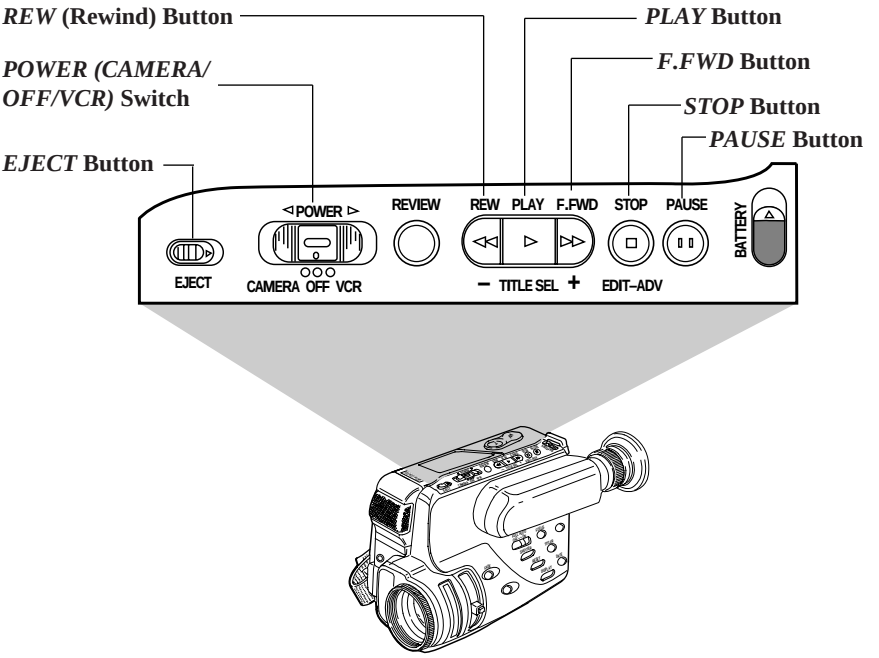
Do not operate the camcorder for extended periods in temperatures below 40°F (4°C) or above 95°F (35°C).

Do not expose the camcorder or adapter/charger to rain or moisture. If either component becomes wet, turn off the power and take the unit to an Authorized RCA Compact Camcorder Servicenter.

Never attempt to force open the cassette door. If the battery reaches its empty level during recording, the camcorder will shut off, but the battery should have enough reserve power to eject the cassette. If the camcorder does not eject the cassette, power your camcorder with the adapter/charger or recharge the battery.

Do not use an adapter/charger or batteries other than the ones specified for the camcorder. Use of the wrong accessories may cause damage to the camcorder.

Viewfinder Playback



Viewfinder playback is the simplest way to watch tapes using the camcorder. This method is generally used only to review scenes immediately after recording because the display is in black and white.

To play back a tape through the viewfinder, follow these steps:

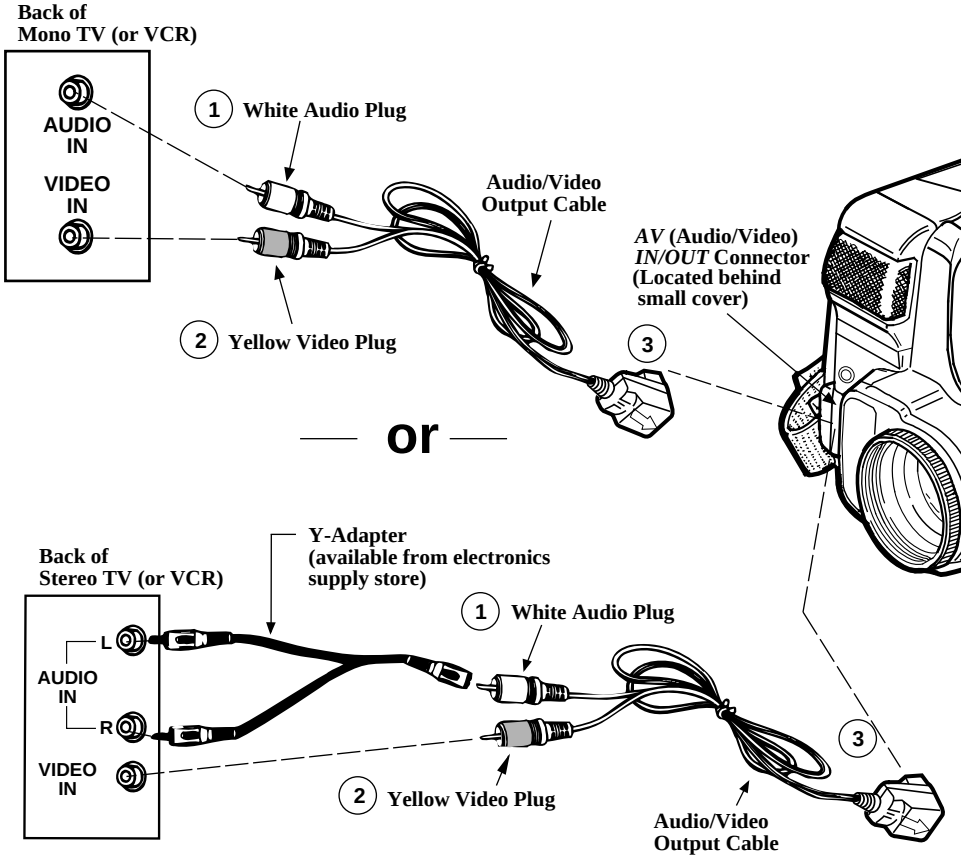
1. Slide the *POWER* switch to the *VCR* position.
2. Slide the *EJECT* button and insert the cassette you want to playback.
3. Press the *PLAY* button to begin playback.
   - During playback, press and hold the *F.FWD* (fast forward) or *REW* (rewind) button if you want to visually search the tape in forward or reverse. Release the button to return to normal playback.
   - During playback, press the *PAUSE* button to "stop the action" and view one frame of the tape. Press the *PAUSE* button again to return to normal playback.

     Caution: Pause is designed for momentary interruptions and should not be used for an extended period of time. If the camcorder remains in the pause mode for more than five minutes, it will automatically move the tape away from the spinning heads to prevent excessive tape wear.
5. Press the *STOP* button when you are finished.

Note: The corresponding buttons on the remote control can be used to operate the camcorder.

Playback on TV (or VCR) with *AUDIO/VIDEO IN* Jacks

To connect your camcorder to a TV monitor (or VCR) with *AUDIO/VIDEO IN* jacks, you will need the audio/video output cable that came packed with your camcorder. If your TV is already connected to a VCR, you can attach the camcorder to the VCR and watch what the camcorder is recording or playing on the TV.



Installation

1. Attach the audio/video output cable's white plug to the *AUDIO IN* jack on the TV (or VCR).

   Note: If your TV (or VCR) has stereo *AUDIO* jacks, attach the white *AUDIO* plug to the one labeled *MONO*. If one is not labeled *MONO*, you may need a Y-adapter to hear both channels.

2. Attach the audio/video output cable's yellow plug to the *VIDEO IN* jack on the TV (or VCR).

3. Attach the plug on the other end of the audio/video output cable to the *AV IN/OUT* connector of the camcorder. Match the tabs on the plug with the notches on the camcorder connector. Do not force the plug.

Playback on TV (or VCR) with *AUDIO/VIDEO IN* Jacks (continued)

Playback Operation and How to Copy Tapes on the VCR

1. A. Camcorder connected directly to TV monitor: Turn on the TV and tune it to the video input channel.

   B. Camcorder connected to VCR that is already connected to TV: Turn on VCR and place it in the "line" or "camera mode". (If your VCR does not have a "line" or "camera mode", consult the VCR owner's manual.) Operate the TV as you normally do to see the signal coming from the VCR.

2. Slide the camcorder's *POWER* switch to the *VCR* position, and insert the cassette you want to playback.
3. Press the *PLAY* button on the camcorder.
   - If you want to "stop the action", press the *PAUSE* button while the tape is playing. Press the *PAUSE* button again to return to normal playback.

Caution: Pause is designed for momentary interruptions, and should not be used for an extended period of time. If the camcorder remains in the pause mode for more than five minutes, the camcorder will automatically move the tape away from the spinning heads to prevent excessive tape wear.

   - During playback, press and hold the *F.FWD* button for fast forward searching, or press and hold the *REW* button for reverse searching. Release the button to return to normal playback.
4. To copy what the camcorder is playing, place a blank cassette in the VCR, and press the VCR's *RECORD* button.
5. Press the *STOP* button when you are finished.

Viewing What the Camcorder is Seeing (or Recording)

1. A. Camcorder connected directly to TV: Turn on the TV, and tune it to the video input channel.

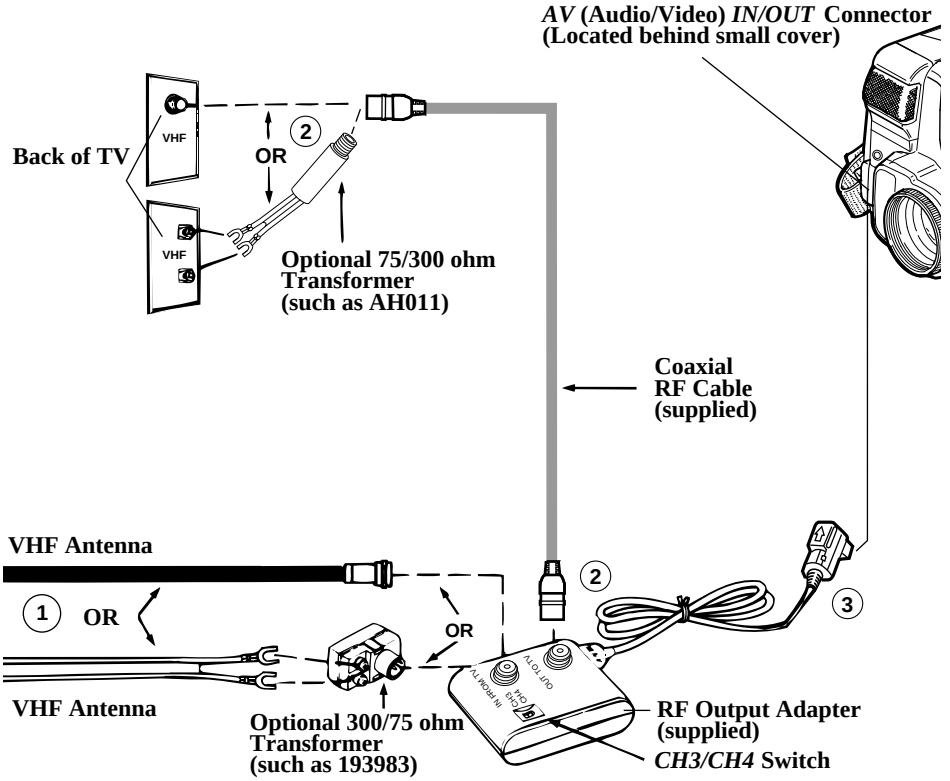
   B. Camcorder connected to VCR that is already connected to TV: Turn on VCR and place it in the "line" or "camera mode". (If your VCR does not have a "line" or "camera mode", consult the VCR owner's manual.) Operate the TV as you normally do to see the signal coming from the VCR.

2. Slide the camcorder's *POWER* switch to the *CAMERA* position, place the *ON/POWERSAVE* lever in the *ON* position, and insert the cassette you want to record on.

   Note: When the camcorder is used as a camera, turn the TV's volume down to prevent a high-pitched squeal caused by feedback.
3. Press the camcorder's thumb trigger to begin recording. You can watch what the camcorder is seeing (or recording) on the TV screen.

Playback on a TV without *AUDIO/VIDEO IN* Jacks

To connect your camcorder to a TV without *AUDIO/VIDEO IN* jacks, you will need the RF output adapter and coaxial RF cable that came packed with your camcorder. If your TV has *AUDIO* and *VIDEO IN* jacks (or is connected to a VCR), *refer to pages 60-61*.



Installation

1. Disconnect the VHF antenna from your TV. Connect the antenna to the *IN FROM ANT* jack on the RF output adapter if you are going to leave the adapter connected to the TV.

   Note: If your VHF antenna is the flat twin-lead type attached by two screws, you will also need an optional 300/75 ohm transformer, *such as 193983 shown on page 3*.

2. Attach one end of the coaxial RF cable to the *OUT TO TV* jack on the adapter, and attach the other end to the VHF input on your TV as shown.

   Note: If your TV has 300 ohm VHF screw terminals, you will need an optional 75/300 ohm transformer, such as AH011 *shown on page 3*.

3. Attach the RF output adapter's plug to the *AV IN/OUT* connector of the camcorder. Match the tabs on the plug with the notches on the camcorder connector. Do not force the plug.

Playback Operation

1. Set the *CH3/CH4* switch on the adapter to channel 3 or 4.
2. Turn on the TV, and tune it to the same channel you selected with the RF output adapter's *CH3/CH4* switch.
3. Slide the camcorder's *POWER* switch to the *VCR* position, and insert the cassette you want to playback.
4. Press the *PLAY* button on the camcorder.

   If you want to "stop the action", press the *PAUSE* button while the tape is playing. Press the *PAUSE* button again to return to normal playback.

   Caution: Pause is designed for momentary interruptions, and should not be used for an extended period of time. If the camcorder remains in the pause mode for more than five minutes, the camcorder will automatically move the tape away from the spinning heads to prevent excessive tape wear.

   During playback, press and hold the *F.FWD* button for fast-forward searching, or press and hold the *REW* button for reverse searching. Release the button to return to normal playback.
5. Press the *STOP* button on the camcorder when you are finished.

Note: The corresponding buttons on the remote control can be used to operate the camcorder.

Viewing What the Camcorder Is Recording

1. Turn on the TV and tune it to channel 3 or 4. When the camcorder is used as a camera, turn the TV's volume down to prevent a high-pitched squeal caused by feedback.
2. Set the *CH3/CH4* switch on the adapter to the same channel you selected on the TV.
3. Slide the camcorder's *POWER* switch to the *CAMERA* position, and insert the cassette you want to record on. Make sure the *ON/POWERSAVE* lever is in the *ON* position. Press the thumb trigger to start recording. You can watch what you are recording on the TV screen.

Normal TV Viewing

For normal TV viewing, you may leave the RF output adapter hooked up to the TV. Just disconnect the adapter's plug from the camcorder, or turn off the camcorder's power.

Note to Cable TV Installer

This reminder is provided to call your attention to Article 820-40 of the National Electrical Code (Section 54 of Canadian Electrical Code, Part I), that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

Trouble Checks

Troubles sometimes are caused by simple "faults" that you can easily correct without the help of a service technician by first checking a few basic remedies.

Before you call or take your camcorder to an Authorized RCA Compact Camcorder Servicenter, look below for the type of trouble you are experiencing. Then perform the simple checks and adjustments listed for that trouble.

If service should be necessary, the warranty information lists what your warranty covers and explains how to get service.

Trouble	Checks and Adjustments
No power	• *ON/POWERSAVE* lever in *POWERSAVE* position. Place lever in *ON* position. • If using battery, it may need to be recharged. • If using AC adapter/charger, make sure it is plugged into a working outlet.
Won't record or playback	• If using AC adapter/charger, make sure it is plugged into a working outlet. • If *DEW* indicator flashes in the viewfinder, there is moisture in the camcorder. Leave power on, and wait until the *DEW* indicator no longer appears. • *ON/POWERSAVE* lever in *POWERSAVE* position. Place lever in *ON* position. • There may be no cassette in the camcorder. • Try ejecting and re-inserting cassette. • The cassette tape may be broken, try another cassette. • You may have reached the end of the cassette, try rewinding it.
Won't playback	• *POWER* switch must be in *VCR* position.
Won't record	• Record-protect tab has been closed. *(See page 26.)* • *POWER* switch must be in *CAMERA* position. • *ON/POWERSAVE* lever must be in *ON* position.
No picture in viewfinder	• Remove lens cap. • *ON/POWERSAVE* lever must be in *ON* position when *POWER* switch is in *CAMERA* position.

Trouble Checks (continued)

Trouble	Checks and Adjustments
Tape stops during rewind or fast forward	• Time-counter memory may be on. Whenever an "*M*" appears with the time-counter display, the camcorder will stop rewinding (or fast forwarding) when counter reads "0:00:00*M*". Press *REW* or *F.FWD* button again to continue rewinding or fast forwarding, or press *DISPLAY* button to turn off memory-stop feature.
Camcorder remains in "stop action" (play-pause) mode	• Press *PAUSE* button to return to normal playback.
Poor auto-focus operation	• Make sure *FULL AUTO OFF/ON* switch is in *ON* position. • Make sure operator is not covering auto-focus window during recording. • Subject is dark or behind glass. Auto-focus may not work under these conditions. Place *FULL AUTO OFF/ON* switch in *OFF* position, and focus manually. • Lens is smudged, and image appears unfocused. • Viewfinder eyepiece focus is misadjusted. *(See page 34.)* • Camcorder is in macro-focus mode. Press and hold zoom button "*T*" to release macro-focus. • Don't use auto focus with wide-angle or telephoto adapters.
Picture is too dark or subject too dark.	• For best results, only use higher shutter speeds for outdoor action. • Subject in front of a strong backlight. Press *BACK LIGHT* button to let more light into the camcorder.
Viewfinder displays are out of focus	• Try adjusting eyepiece focus control. *See page 34.*
Shutter-speed display not in viewfinder	• *POWER* switch must be in *CAMERA* position. • Press *DISPLAY* button to bring displays to viewfinder.
Date and/time or date were recorded on tape	• Date and time or date will be recorded on tape whenever they appear in the viewfinder. • Press *DATE* button to remove them from viewfinder when recording.

Trouble Checks (continued)

Trouble	Checks and Adjustments
Date and/or time are incorrect	• Clock battery may need replacing. *See page 32*. • Date and/or time may need to be set. *See pages 32-33.*
Remote control will not operate camcorder	• Aim remote control at remote control sensor on camcorder. • Remote control battery may need replacing. • If *POWER* switch is in *CAMERA* position, the *ON/POWERSAVE* lever must be in *ON* position for camcorder to operate. • *POWER* switch must be in *CAMERA* or *VCR* position for camcorder to operate. • Camcorder's remote control sensor is exposed to direct sunlight or strong artificial light. This may interfere with operation of camcorder by remote control.
(Pro870 Only) Images are recorded thinner than they are	• Camcorder is set to the *16 X 9* mode. Press *ZOOM MODE* button. *Details are on page 47.*

Specifications

General

Power requirement: 6VDC
Power consumption: 6 watts (normal)
Weight: 1.8 lbs. (810g)
Dimensions: 4-7/16"(W) x 4-1/2"(H) x 6-7/8"(D) (112 x 114 x 174mm)

Video Recorder Section

Format: 8mm
Record/Playback System:
Two video record/playback heads
One flying erase head
Headwheel Cylinder Diameter: 40 mm
Video Signal: EIA Standard NTSC Color

Camera Section

Scanning: 525 Lines/60 Fields/30 Frames
Image Sensor: 1/3" high-resolution, solid-state CCD Imager
Tripod Mount: One 1/4" x 20 threaded hole
Lens: f1.8
8:1 (6.7-54mm)
Diameter: 34 mm

All features and specifications are subject to change without notice.

This digital apparatus does not exceed the class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

L'interférence radioélectrique générée par cet appareil digital ne dépasse pas les limites de la classe B édictées par le Réglement sur les peturbations radioélectriques du Ministrére Canadien des Communications.

Compact Camcorder Limited Warranty

What your warranty covers:

- Any defect in material or workmanship.
- 90 days for labor charges.
- One year for parts.

The warranty period for rental units begins with the first rental.

What we will do:

- Pay any Authorized RCA Compact Camcorder Servicenter the labor charges to repair your camcorder.
- Pay any Authorized RCA Compact Camcorder Servicenter for the new or, at our option, rebuilt replacement parts required to repair your camcorder.

How you get service:

- Check with your RCA Dealer or call 1-800-336-1900 for the Authorized RCA Compact Camcorder Servicenter nearest you. State that you have an RCA 8 millimeter camcorder.

If an Authorized RCA Compact Camcorder Servicenter is conveniently near you:

- Take your camcorder to the Authorized RCA Compact Camcorder Servicenter of your choice.
- Show the Servicenter Representative your sales receipt or other evidence of purchase date.
- Pick up your camcorder when repairs are completed.

If an Authorized RCA Compact Camcorder Servicenter is not located conveniently near you:

- Pack the camcorder so that it will not be damaged during shipping. (We recommend using the original carton and packing materials.) Include any cables and other accessories originally furnished with the camcorder.
- Include in the camcorder carton (1) a copy of your sales receipt or other evidence of purchase date, (2) your name and address, and (3) a brief description of the problem.
- Ship the camcorder to an Authorized RCA Compact Camcorder Servicenter.
- Pay any charges billed to you by the Servicenter for service not covered by the warranty.

What your warranty *does not* cover:

- Customer instruction. (Your owner's manual clearly describes how to install, adjust, and operate your camcorder. Any additional information should be obtained from your Dealer.)
- Installation and related adjustments.
- Cleaning of video/audio heads.
- Damage from misuse or neglect.
- Batteries for clock or other features.
- A camcorder that has been modified or incorporated into other products or is used for institutional or other commercial purposes.
- A camcorder purchased or serviced outside the USA.

How state law relates to this warranty:

- This warranty gives you specific legal rights, and you also may have other rights that vary from state to state.

Product registration:

- Please complete and mail the *product registration card* packed with your camcorder. It will make it easier to contact you should it ever be necessary. The return of the card is not required for warranty coverage.

If you purchased your camcorder in Canada:

- The Canadian warranty applies in place of this warranty.

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RCA

For your nearest home
entertainment Dealer
or Authorized Servicenter
call toll-free in the U.S.A.

1-800-336-1900

If you would like a copy of this manual in French, please follow the instructions below:

Si un livret d'instructions en français n'est pas inclus avec votre appareil, vous pouvez en obtenir un (indiquer le numéro de modèle, votre nom, et votre adresse) en vous adressant à:

Thomson Électronique Grand Public du Canada
Service des données techniques
6540 Tomken Rd
Mississauga, Ontario, Canada L5T 2E9

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Indianapolis, IN 46206

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